



Multimedia Journalism and Narrative Flow

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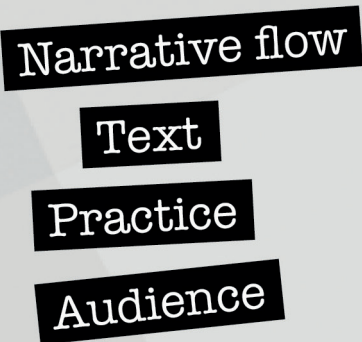
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MULTIMEDIA JOURNALISM AND NARRATIVE FLOW

BY
KATE KARTVEIT

DISSERTATION SUBMITTED 2016



AALBORG UNIVERSITY
DENMARK

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CV AND PERSONAL MOTIVATION

As a former practitioner within public service journalism for 20 years and lecturer for the last 15 years, I have been confident that I recognise quality journalism when I explore a journalistic piece. However, when I first started lecturing in 2000, I realized that merely communicating to the students *how* to execute journalism was not satisfactory for my students or for me. Why do we execute journalism the way we do? What are the means, what is the purpose of journalism and what is the desired effect of journalism on society were questions that were winding through my mind. Having been working with ‘quality public service journalism’, I had been socialised into a specific mindset of the public service broadcasting practice, and most of the theoretical and academic aspects that I had once studied at school and university were more or less acting in my unconscious mind as tacit knowledge. I had to recap and, in addition, study and read others’ work, and after several years I found myself writing a textbook. ‘The ABC of TV-Journalism’ was published in 2006, and since then I have participated in a few academic research projects and publications and developed a distinct interest in a ‘deep understanding’ of how to communicate quality journalistic stories. During the last three years of PhD study, I have been allowed to do just that. The path from practitioner to lecturer to researcher has been winding, at times frustrating, but most of all challenging. Others must be the judge of whether my mindset is now more reflective. In the current situation of constant development in media practices and products, it seems more important than ever to ground journalism education on knowledge that goes beyond tacit knowledge and best practices.

ENGLISH SUMMARY

This dissertation consists of five articles and a Summary. Online multimedia news stories intermix media types that have traditionally been produced using distinctive, media-dependent storytelling logics and narrative structure(s). Consequently, the legacy media's traditional storytelling templates have been challenged and further developed within multimedia storytelling. The objects for investigation in this dissertation are longform embedded multimedia feature stories, the audience's reading responses to this specific genre within journalism and the perceptions of production of longform multimedia narratives by a group of experienced media workers.

Article 1 in this dissertation is a literature review of scholarly works written on the topic of multimedia since 2000. The aim of the article is to identify gaps in contemporary research, specifically regarding the analysis of journalistic multimedia productions. In Article 2 (in Danish), I discuss how case studies can be generated for the purpose of textual analysis. The narrative flow of multimedia narratives is the focus point of Article 3. Vital flow factors are identified and discussed by analysing two longform linear author-driven embedded multimedia case studies. The study also proposes a modified taxonomy of multimedia narratives, or a development of the triangle model that has been proposed by Hernandez and Rue (2016). In Article 4, I execute an eye-tracking experiment on one of the case studies analysed in Article 3. The analysis shows both convergence and discrepancy with the visual and textual analysis. This part of the study emphasises the fruitful outcome of mixed methods when investigating narrative flow in author-driven multimedia narratives. In Article 5, I investigate how experienced media workers perceive the production of longform multimedia narratives. Applying a phenomenographic approach, in the outcome space, the study proposes six different collective categories of perception of multimedia production: the learner, the developer, the artist, the collaborator, the publisher and the manager. The study's findings may influence how competencies are developed, how multimedia production is

implemented in editorial rooms and how media workers progress and work in new ways.

In the Summary of the dissertation, the five articles are placed in a scholarly context, and the research project's position in the field is discussed. In addition, the Summary consists of a discussion of 'quality journalism' and 'narrative flow', which are central concepts in the presented articles.

The phenomena studied in this dissertation were investigated through a snapshot of a field undergoing permanent evolution. I believe that, within its limitations, the studies contribute to the existing knowledge of narrative flow in multimedia stories, how the audience navigate through a longform multimedia narrative and how a group of media workers perceive longform multimedia production practices.

DANSK RESUME

Afhandlingen består af fem artikler og et resumé. Online multimedie nyhedshistorier integrere forskellige medietyper og udfordrer dermed de fortællelogikker og den narrative flow som kendetegner historiefortælling i de traditionelle medier. Den narrative flow i multimediefortællinger er fokuspunktet i artiklerne i denne afhandling. Gennem visuel- og tekstanalytisk analyse af to casestudier, som begge er kendetegnet ved at være off-deadline redaktørstyrede, lineære multimedieproduktioner, identificeres og diskuteres vitale flow faktorer i narrativerne. Undersøgelsen foreslår desuden en modificeret taksonomi af multimedie fortællinger gennem en udvikling og udvidelse af Hernandez' og Rue's (2016) trekant model. Afhandlingen består videre af en artikel der en af casestudierne benyttes i et eye-tracking eksperiment. Undersøgelsen viser både konvergens og divergens i forhold til de visuelle- og tekstanalytiske resultater. Undersøgelsen understreger at multi-metodisk tilgang ved undersøgelse af multimediefortællingens flow giver en dybere forståelse af fænomenet.

Et andet fokuspunkt er, hvordan erfarne mediemedarbejdere opfatter produktion af multimediefortællinger og konstruktion af narrative flow. Gennem anvendelse af en fenomenografisk analysemodel, udmøntes seks forskellige kollektive kategorier eller variationer af opfattelsen af multimedieproduktion: den lærende, udvikleren, kunstneren, samarbejdspartneren, publicisten og lederen. Resultaterne af undersøgelsen kan potentielt påvirke hvilken kompetenceudvikling som er nødvendig i medierne, hvordan multimedieproduktion implementeres i de redaktionelle miljøer og hvordan mediearbejdere kan arbejde mere bevidst og innovativt i tilrettelæggelsen af multimedieproduktionen.

De to øvrige artikler er et "literature review", en evaluering og kategorisering af videnskabelige værker inden for multimedieforskning og en artikel (på dansk) der diskuterer, hvordan casestudier kan genereres med henblik på tekstanalyse i forhold til et givet genstandsfelt, fænomen og forskningsspørgsmål. I

afhandlingens resumé er de fem artikler placeret i en videnskabelig kontekst og forskningsprojektets position i feltet diskuteres. Resuméet består i tillæg af en diskussion af ”kvalitetsjournalistik” og ”narrative flow”, som er centrale begreb i de præsenterede artikler.

De fænomener, som optræder i denne afhandling, er undersøgt gennem flere nedslag i et felt, som undergår en permanent evolution. Inden for denne begrænsning er det dog lykkedes, at bidrage med værdifuld ny viden til den allerede eksisterende kundskab om narrativ flow i multimediehistorier og hvordan praktikere opfatter multimedieproduktionsprocessen.

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I would also like to thank the participants at international media and journalism conferences who have provided feedback on my paper presentations,

and lecturers and participants at various PhD courses that I have attended who have enlightened me through their research approaches and various theories and methods. A special thank you also goes to practitioners in international media outlets who agreed to be interviewed about their work experiences and to the participants in the eye-tracking experiments. Without the vital support of all those mentioned above, it would not have been possible for me to conduct my studies and research. But to my life companion and dear husband, Henrik W., I owe the most. His backing, understanding, critical remarks and love through the last three years have been crucial to my work process. I am grateful that I have been given the opportunity to complete this PhD dissertation – thank you again to all who have been involved.

Aarhus 18.05.16.

Kate Kartveit

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CHAPTER 1. INTRODUCTION

The subject of this dissertation, ‘Multimedia Journalism, Narrative Flow and Perceptions of the Practice’, was initiated by a questioning, or ‘undring’, in 2010. Having been a TV journalist for 20 years and a lecturer in TV journalism at various journalism-centred educational institutions for the last 15 years, I began working on how multimedia journalism productions could be communicated in an engaging and fluid way. My general observations of online news media revealed that, while most stories were text- and photo-based, the body texts were occasionally supported by a sound bite or video clip. I registered solitary examples of multimedia news narratives that merged media types, but my overall impression was that online journalism was highly influenced by the presentation form of the printed press (Karlsson and Clerwall 2012). Why was this so? I searched for textbooks and academic articles that could answer this question, but found very few items that could contribute with knowledge that went beyond empirical and technological guidance or ‘best practice’ of multimedia production. In scholarly works, I observed that there was an on going scholarly discussion about the impact of digitalisation on journalistic quality¹. I also found that some scholarly works were examining aspects of story construction in journalistic multimedia stories; however, most were discussing the impact of digitalisation on journalistic processes, publication strategies and audiences². I learned that there was, apparently, a scientific gap in the scholarly works about multimedia storytelling. My project developed as a result of my wanting to investigate the following questions: How do the visual design and content elements in longform embedded multimedia news stories work together to create a narrative whole? How does the audience experience a longform multimedia feature. And furthermore, what significance does longform multimedia production have on media employees’ perception of the practice?

¹ See section ‘Quality of Journalism, in Chapter 1

² See Article 1, ‘Multimedia Stories and Narrative Structures in Online Media: A Literature Review’ in Chapter 3.

I have explored this phenomenon over the course of the last three years, which has required me to conduct studies using various methodologies and approaches. This dissertation consists of five articles that were produced at different stages of my research period. In the following sections, I will first give an introduction to the articles in this dissertation, and then follow with a discussion of the scholarly context of the dissertation. After this, I will discuss the terms ‘quality journalism’ and ‘narrative flow’, which are the central concepts of Articles 3, 4 and 5. In Chapter 2 I will account for the research design of the dissertation as a whole and the theoretical and empirical approaches and findings of each article, and in Chapter 3 the five articles will be presented in full. Lastly, in Chapter 4 I will discuss the outcome of the studies and the nexus of the dissertation as whole³.

INTRODUCTION TO ARTICLES

There is a great variation in methods and phenomena contributing to the understanding of development in the current digital media landscape. However, most studies are concerned with the deadline-centric newsroom workflow and the impact of structural factors, technology and audience relation (Boczkowski 2004; Singer 2004; Domingo 2006; Bock 2012). In contrast to the majority of scholarly works, the majority of the articles in this dissertation have a commonality in studying the phenomena of off-deadline news journalism. The specific media texts investigated in this study feature the genre of standalone multimedia longform feature narratives. Further, the journalistic practice is studied through the lens of the variations of perception of media workers that produce longform multimedia feature journalism and finally I investigate reader responses on a longform multimedia feature story. By studying off-deadline journalism – examining the texts, the practice and the user aspect in a context that is, so to say, adjacent to the daily online news production cycle and its demands for rapid work processes, liquid work

³ References in the five articles are included in each article in Chapter 3, references for Chapter 1, 2 and 4 are presented after Chapter 4.

routines and (forced) cooperation and multiskilling (Deuze 2007, 151) – it may be possible to study phenomena that are not ‘polluted’ by these ‘noise’ factors in digital news media. Further the main emphasis in this study has been guided by the concept of ‘narrative flow’ in longform multimedia narratives. The term and definition ‘narrative flow’ will be discussed in the section ‘Narrative Flow’ at the end of this chapter.

Article 1, ‘Multimedia Stories and Narrative Structures in Online Media: A Literature Review’ is a review of scholarly works on digital journalism, with a focus on works concerned with multimedia content and narrative structure and flow in line with other scholars (Mitchelstein and Buczkowski 2009; Steensen 2010; Karlsson, 2012). The period of the review is from 2000 on and it was completed in 2013, but it has been revised within the last three months. In the period following the onset of digital media in 1994 to 2000, the presence of longform embedded multimedia production is occasional, as are the scholarly works concerned with longform multimedia production, probably due to technological constraints. Article 2, ‘Informationsorienteret caseudvælgelse og den usædvanlige nyhedshistorie’ discusses the methodological approach employed when the goal is to generate information-based case studies for the purposes of analysing a multimedia news text. Article 3, ‘Narrative Flow in Journalistic Multimedia Feature Narratives’, is a comparative analysis of two longform multimedia feature narratives. Article 4, ‘They Never Made It to the End. Reader Uses of a Multimedia Narrative’, is an analysis of how a group of readers navigate through a multimedia narrative and employs the use of an eye-tracking experiment. Article 5, ‘How do they do it? Multimedia Journalism and Perception of the Practice’, is an informed phenomenographic analysis of the variations of perceived practice of multimedia journalism production based on qualitative interviews with experienced media employees. Table 1 provides an overview of the five articles, exploring their purpose, their main approach and their publication status.

Article	Purpose	Main Approach	Publication
Article 1 Multimedia Stories and Narrative Structures in Online Media: A Literature Review	Review of scholarly works on digital journalism with a focus on works concerned with multimedia content and narrative structure.	Literature search, selection of works and analysis of the scholarly approach of the works.	Was presented at the Nordmedia Conference in August 2013. (revised)
Article 2 Informationsorienteret caseudvælgelse og den usædvanlige nyhedshistorie	To discuss the methodological approach employed when the goal is to generate information-based case studies.	Analysis and discussion of the process of generating a multimedia news text for textual analysis.	Published in the peer-reviewed academic book 'Selektion' (Mærkk-series) in August 2015.
Article 3 Narrative Flow in Longform Journalistic Multimedia Feature Narratives	To conduct a comparative analysis of two longform multimedia feature narratives.	Comparative textual analysis using theory of visual social semiotics and journalistic parameters.	The article will be re-submitted to journal in an abbreviated version.
Article 4 They Never Made It to the End. Reader Uses of a Multimedia Narrative	To analyse how a group of readers navigate through a multimedia narrative.	Analysis and discussion of an eye-tracking experiment, survey and exit interviews with a group of readers.	The article is accepted for peer-review in 'The Journal of Applied Journalism & Media Studies'.
Article 5 How Do They Do It? Multimedia Journalism and Perception of the Practice	To conduct an analysis of the perceived practice of multimedia journalism production.	Phenomenographic analysis of qualitative interviews with media workers.	The article is in the second peer-review process for Sage's journal 'Journalism, Theory, Practice & Criticism'.

Table 1: Description of the five articles and their purpose, main approach and publication status.

Articles 2, 3 and 5 were developed in a parallel process. The data generation for Article 5 was conducted from February through November 2014 while I was also working on a revised version of Article 2 and on the comparative analysis presented in Article 3. The parallel process of analysing multimedia narratives and interviewing media professionals was fruitful in the sense that what I had reflected on throughout the analysis of the longform multimedia features could be addressed during the interviews with the media employees. The experiment in Article 4 was conducted after the textual analysis of the multimedia narratives and interviews with media workers were completed. As such this dissertation represents an approach employing mixed methods and using sequential research design (Padgett 2012, 5).⁴ The applied methods, research goals and findings of Articles 3, 4 and 5 are supplementing each other, and I believe that the dualism in the process helped me to understand how multimedia production processes take place, and how multimedia productions communicate meaning.

NEWS JOURNALISM RESEARCH

Research in news journalism has drawn from a wide range of disciplines such as political science, sociology, history, language and cultural studies. Tuchman (Tuchman 2002, 81) discusses news production research conducted since the 1950s. She identifies three main areas of news research: 1) political economy, building upon Marxist ideas and traditionally suggesting that media exercise hegemony by limiting both the specific agendas of the political process and the cultural universe made available through media representations. 2) Phenomenology and ethnomethodology, emphasising the meaningful nature of social life and examining the role of news media in constituting and disseminating meaning; here, she argues that individual journalists, news outlets and media institutions collectively accomplish the social construction of reality. 3) Textual studies, arguing for a closer

⁴ See 'Position in the field' in Chapter 2.

reading of news stories as narratives that are replete with symbols of the society which shaped them, and which they in turn reshape and reassert.

In a different perspective than that of Tuchman, Wahl-Jørgensen and Hanitzsch (Wahl-Jørgensen and Hanitzsch 2009b) divide journalism research into coexisting and overlapping phases: normative, empirical, sociological and global-comparative. In the origin of journalism studies at the beginning of the twentieth century, scholars were studying what journalism ought to be and how journalists do their job. According to Wahl-Jørgensen and Hanitzsch, in this normative phase, the concern was mainly on journalists as individuals. The empirical phase finds its origin in the United States, beginning with the establishment of professional journalism education and the birth of the 'Journalism Bulletin' in 1924, which in its first edition suggested there be empirical research on the form, content and effects of journalism. The general empirical turn in social science seen at this point in history, which saw a move from individual to organisational attention, was later taken further into the sociological phase (Steensen and Ahva 2015). Journalism research has been dominated by two different perspectives on news production: construction and selection (Hjarvad 2012, 88). Studies from the selection perspective have tried to discern systematic patterns and structures in the ways in which journalists and news organisations rework the news in various steps. Studies on 'gatekeeping' and 'news values' are examples of studies within this perspective. Challenging the selection perspective, the sociological turn was informed by the construction perspective. In this perspective, news is a social construction of reality that, in turn, influences the ways in which society comes to understand its own public life. Since the 1970s, this research has focused on news organisations and on the internal constraints and policies influencing news production. Other studies have supplemented this perspective by examining external conditions and market considerations and their interplay with internal factors (Hjarvad 2012, 91; Hallin and Mancini 2004, 264). In the sociological perspective, news culture and news production has also been studied through the lens of Bourdieu's field theory. The fourth phase of journalism studies identified by Wahl-Jørgensen and Hanitzsch

(Wahl-Jørgensen and Hanitzsch 2009b) is the global-comparative phase; this phase is closely tied to the digitalisation of media. Characteristics of this phase are numerous theoretical approaches and the increasing cooperation among scholars leading to the dissolution of borders between nations, markets both public and private, communication forms, and professionals and amateurs.

In this last phase – ‘the digital age’ scholars have reviewed digital media research using different approaches. One could divide the scholarly approaches into two tendencies: historical approach and categorisation of research topics. The first tendency of digital media research is conducted through a historical approach.

Domingo (Domingo 2008) found that research on digital media can be divided into three phases. The first phase of research was dominated by ‘utopic’ theoretical approaches studying how ‘New Media’ would revolutionise journalism. In the second phase, researchers investigated why digital media did not develop as predicted and started to study the dynamics of the news rooms through questionnaires with practitioners but did not succeed in gathering satisfactory findings. The ongoing third phase, according to Domingo, is characterised by a critical and social constructivistic approach, focusing on empirical studies emphasising the importance of culture and context (Domingo 2008, 681).

In line with Domingo, Steensen (Steensen 2010), inspired by Boczkowski (2004) and Domingo (2006), identifies three waves in the research of online journalism⁵. The first wave, from the introduction of the Internet in 1994 and the following decade, was driven by technological determinism. The second wave of research takes two directions: a descriptive and an empirical wave, and a wave of research that takes a constructivist rather than a technological determinist approach. Steensen claims that the third wave is still just a modest ripple, in which other research approaches are considered and introduced.

⁵ Digital media is used here as a common term for online and mobile media.

The second tendency of scholarly works addresses a categorisation of different research topics. Mitchelstein and Buczkowski (Mitchelstein and Buczkowski 2009, 562) review scholarship on online news production published since 2000. Their study examines research on five key topics: historical context and market environment, the process of innovation, alterations in journalistic practices, challenges to established professional dynamics and the role of user-generated content. Another typological approach within this tendency is presented by Morlandstø (Morlandstø 2012, 295). She reviews research within journalism in the Nordic countries from 1995 to 2009. Her typology of the journalistic research field is divided into products, practices, subject areas (ethics, sources, language, etc.), framework conditions (economy, technology, ownership, etc.), research on specific media institutions and work with an historical perspective. In research on multimedia journalism, Deuze (Deuze 2004) reviews multimedia journalism through the perspectives of institutional, technological, organisational and cultural aspects, while Karlsson and Clerwall (Karlsson and Clerwall 2011, 551-552) define three main areas of interest in digital news media: the producers and multimedia, the audience and multimedia and multimedia and content.

The different categorisations of digital media research tendencies developed by these scholars contribute to clarifying the different objects and scholarly traditions within journalism research. The various categorisations have overlapping classifications, and the commonality for the majority of the approaches is that, the practice of journalism production, the content of journalism productions and the audience aspects are present in the categorisations. This underlines the agreement that these are key areas in journalism research. In line with this, the fields of research of this dissertation are therefore concerned with the practice, the content and the user aspects of digital news media.

I therefore find it relevant in the context of this dissertation to focus on factors that can impact, content production practices, news content and audience aspects. In the following sections, I will elaborate on these aspects of the discussion in scholarly works.

PRACTICES, CONTENT AND THE AUDIENCE

Scholars seem to agree that news is a social artefact that is the result of particular work practices and is socially patterned (Hjarvad 2012; Mogensen 2000). News production takes place in organisational settings in which the type of ownership, managerial hierarchies, resources, technology and market considerations influence how news reporters work and the stories they produce (Hallin and Mancini 2004). Also, the continuous technological changes and development in the realm of digital media can play an influential role in journalistic practices. Pavlik (Pavlik 2000, 229) focuses on how technology influences journalism and asserts that ‘journalism has always been shaped by technology because – for journalism, function has often followed form’ (2001, 203). On the other hand, Deuze (in Mitchelstein and Boczkowski 2009, 567) argues that technology is not an independent factor influencing journalism from outside, but must be seen in terms of implementation and how it extends or amplifies established ways of executing the profession. On the other side, the practices and norms of journalists have been formed through historical processes, such as the development from party press to independent watchdog and defender of democracy and transparency in western culture. This interplay is also illustrated by Boczkowski’s (Boczkowski 2004, 199) research on three online newspapers, which shows that the newsroom worker’s adaption to new technologies relates to the different variations of organisational structures, work practices and representations of users. Factors such as digitalisation, wireless web- and mobile-transmitting systems, increased bandwidth, easily operated equipment and the implementation of cross-media technology – computers, tablets and smart phones – have initiated an ongoing development of workflows and content in digital news media. In a more recent study, Mitchelstein and Boczkowski (Mitchelstein and Boczkowski 2009) identify four aspects of changes in journalistic practices that have attracted most of the attention of scholarly research in online news: modifications in editorial workflow, alterations in news-gathering practices, acceleration of temporal patterns of content production and the convergence of print, broadcast and online operations. Other works (Steensen 2009; Deuze, Bruns and Neuberger 2007) found that the media’s choice of software, for example, and how workflow and decision-

making are organised in the editorial room have an influence not only on content production, but also on the content and form of news stories. News is not value free, but constructs a social reality (Hjarvad 2012). Journalists as professionals share certain ideas (news values) that make certain social conflicts and other occurrences into news while neglecting others. The online newsroom with a 24-hour deadline and the accompanying demands for rapid work processes, liquid work routines and (forced) cooperation and multiskilling (Deuze 2007, 151; Nygren 2008, 268) have influenced the journalistic practice. Traditional news values, work processes and work cultures have been challenged (Deuze 2007; Quandt 2008; Boczkowski 2009; Hartley 2011), and as a result, the journalistic profession is changing (Usher 2011; Robinson 2011). Borders between professions are diminishing, stories are increasingly produced from the news desk and production has turned into a popularity contest with the frequency of 'clicks' as the main parameter. Digital technology has changed the news media, but news outlets have never been static organisations. News is a product of interaction between news organisations and journalists on the one hand, and actors from other social institutions on the other (Hjarvad 2012), and seeing as economic, social and cultural factors in society have been and continue to be in constant development, the journalistic practice in news media will probably continue to adapt, change and exploit.

The traditional news media's function as a gatekeeper has been discussed by Axel Bruns (Bruns 2005, 2), who introduced the term *gatewatching*. Further, Bruns (Bruns 2008, 23) coined the term *produsage* to better describe the current paradigm shift towards user-led forms of collaborative content creation in the media. A study by Domingo (Domingo 2008, 698) found that although online media made user participation possible, the principles of traditional journalistic culture tended to diminish journalists' willingness to explore audiences' participation. Karlsson and Clerwall's (Karlsson and Clerwall 2012, 393) study supports the finding that users do participate in online news, but indicates that journalists initiate news stories and invite users to contribute later. Conversely, Vestergård (Vestergård 2011, 32) found that user-generated content (blogs) has little influence on mainstream media's online

editions when it comes to political and societal issues. Editors of Danish national media estimate that user contributions result in some 10 news stories a week, while approximately 1,400 items of news are produced.

Jenkins et al. (Jenkins, Li and Krauskopf 2008, 74) introduce the phrase, ‘If it doesn’t spread, it’s dead!’ They emphasise that news production and consumption is a popularity contest, led by the ability to spread the news through the stories that are chosen and shared by consumers. In the continuation thereof, Engebretsen (Engebretsen 2006) claims that in the interactive news discourse, new means and methods are introduced; dialogue becomes more important than monologue, cooperation more important than delivery, process more important than product and discussion more important than narrative technique. This is supported by Lysak, Cremedas and Wolf (Lysak, Cremedas and Wolf 2012), who find that online media are embracing social media to connect with news consumers and for raising the newsroom’s profile in the community. Newsrooms are using social media as a newsgathering tool, and are encouraged to have an individual social media presence. Krumsvik (Krumsvik 2009, 170) found that the broadcasters CNN and NRK both emphasised the Web-media’s role as increasing the contact with the audience to support the broadcasting service and extend reach. Thurman and Schifferes (Thurman and Schifferes 2012) found that news organisations increasingly use personalisation features to predict readers’ content preferences on mobile devices and in conjunction with social networking platforms, but concluded that the implementation of this is in an early stage. The discussions in these scholarly works demonstrate that the user-directed aspects of digital media are diverse, and that it is difficult to draw a definite conclusion on the impact of user directed aspects. The technological potentials of user influence are definitely significant, but the real influence of users might be more on distribution through social media than on content production.

The blog sphere, citizen-journalism websites, YouTube and similar publishing platforms are challenging the news media’s publishing hegemony and have concurrently offered millions of citizens the ability to spread information that

has not been evaluated by the media's gatekeepers. Within journalism, the democratic potentials of the development of user influence have been celebrated (Gilmour 2004, 44), but Turner (Turner 2010) refutes the proposition that this development necessarily carries with it democratising politics, and points out that it might be a more demotic turn than a democratic turn. Haas (in Mitchelstein and Boczkowski 2009, 566) argues, on the other hand, that few web bloggers participate in any independent news reporting, instead relying on the mainstream media for accurate information about the topics of their blogs. Wall (in Mitchelstein and Boczkowski 2009, 571) claims that blogs about the Iraq war appear to challenge elite information control and question the legitimacy of mainstream news. However, the mainstream media itself hosts blogs and allows journalists within the media and other independent bloggers to publish texts on these sites. Matheson (in Mitchelstein and Boczkowski 2009, 571) argues that this practice underscores the tension between maintaining the one-way orientation of journalism and experimenting with novel dialogical forms of communication.

A study by Bivens (Bivens 2012, 114), with a focus on production within television news organisations in the UK and Canada with associated online activities, highlights three significant changes in the news organisations: 1) shifts in traditional news flow cycles, 2) heightened accountability and 3) evolving news values. Bivens claims that rising public documentation via mobile phones inserts a new element into traditional news flow cycles, that material from bloggers acting as citizen journalists occasionally aids reporting of contested topics and that some journalists have modified their daily routines to reflect the opportunities enabled by new media technology. The democratic dimension of digital media exposed above shows both tendencies of increased willingness in digital media to allow user influence on content and journalistic practice and a tendency among media workers to reject real influence on content production. It should, however, be noted that the focus point of the referred studies above discusses some of the perspectives of multiple variables that could be implemented in measuring the democratic dimension of digital media

The above exposition of the main discussions within the discourse in scholarship shows that the most pessimistic voices about the developments within journalism and journalistic content after the entrance to digital platforms may be erroneous. The landscape is diverse, and scholars do not agree about if—and how—quality journalism will survive and what the digital platforms will bring in the future. New technology and adjusted practices are rapidly being implemented, and both user influence and democratic dimensions have yet to be investigated further. My project does not focus on the pure technical or democratic dimensions, but I consider it essential to present these tendencies as a background for the five articles presented here, because journalistic content production and practices are not progressing in a vacuum. In my research, I have probed a specific, narrow part of the field: the narrative flow and production and perception of standalone longform embedded multimedia narratives. The approaches and discussions above add perspective to these studies. In doing this, the gap that my study is seeking to fill is contextualised and connected to the greater landscape of digital journalism research.

An underlying premise in both scholarship and professional discourse is concern about the impact that digitalisation has had and is having on the quality of journalism. I have defined the two case studies that are analysed in Article 3 as ‘quality journalistic narratives’, and in Article 5, the interviewees are engaged in what they define as ‘quality journalism’. But what is quality journalism? Is it possible to measure, and with what variables and from whose point of view can we define ‘quality’? In the next section, I will discuss a selection of scholarly works concerned with these questions.

QUALITY OF JOURNALISM

The media systems of Western democracies, which are the context of the analysed data of this dissertation, are diverse. Hallin and Mancini's (Hallin and Mancini 2004) framework of media systems conceptualise four dimensions in a typology of media systems: the structure of media markets, political parallelism, the professionalisation of journalism and the role of the state and five dimensions of the political context of the media systems. They develop three ideal models of media and politics: the Mediterranean, or the Polarized Pluralist Model; North/Central Europe, or the Democratic Corporatist Model; and North Atlantic, or the Liberal Model. I will not discuss the findings of this comprehensive study as such, but will note that the different systems are characterised by various levels of professionalisation of journalism. The data in this dissertation are predominantly generated in systems characterised by strong professionalisation, which means that there are work standards and codes of conduct and ethics that are essential to professional journalism and connected to the concept of a free press and to freedom of speech. However, the professional activity of producing journalism might differ depending on local and national culture-specific relations, socio-economic backgrounds or levels of education, among other factors, within the profession and among audiences (Vekhoov 2010).

There are several scholarly works that discuss the definition of *quality* in professional journalism. Within a sociological approach, Bogart (Bogart 2004) surveyed 746 editors and found that the top three measures of quality in newspapers were: a high ratio of staff-written articles as opposed to wire service copy, a large amount of editorial (non-advertising) content and a high ratio of interpretation and background of news. This definition of quality journalism is measurable in content analysis projects and has therefore been implemented in other studies (Vekhoov 2010).

The distinction between tabloid and broadsheet press, or equally popular and quality media, is a widely used differentiation in journalism studies (O'Neill and Harcup 2009). Entman (Entman1989) introduces a categorisation of the media: traditional journalism, tabloid journalism, advocacy journalism and entertainment. These types have different levels of commitment to five key journalistic standards: accuracy, balance, holding government accountable, separation of news from editorials and advertising and the degree to which there is a determination to maximise profit (Jones 2009, 43).

The Project for Excellence in Journalism (renamed to The [Pew Research Center](#)'s Journalism Project in 2014⁶) led a research project that would identify principles that are embedded in the practice of quality journalism. The principles are not only seen from a production perspective, but also state what the citizens have the right to expect from journalism (Kovach and Rosenstiel 2001, 12). Within these principles, the underlying premise is that the role of journalism to provide people with the information needed to be free and self-governing. The principles are:

1. Journalism's first obligation is to the truth.
2. Its first loyalty is to citizens.
3. Its essence is a discipline of verification.
4. Its practitioners must maintain an independence from those they cover.
5. It must serve as an independent monitor of power.
6. It must provide a forum for public criticism and compromise.
7. It must strive to make the significant interesting and relevant.
8. It must keep the news comprehensive and proportional.
9. Its practitioners must be allowed to exercise their personal conscience.

⁶ The Pew Research Center is a nonpartisan think tank that informs the public about issues, attitudes and trends shaping America and the world.

The principles above can be characterised as universal standards and core values for quality journalism, but can hardly be regarded as exhaustive. Factors such as fairness and balance in journalistic coverage and ethical codes of conduct are not included, but are regarded as highly relevant by other scholars (Deuze 2005, 445-7). Gladney et al. (Gladney, Shapiro and Castaldo 2007) present a study that focuses on how the essence or unique features of online media affect the journalistic standards by which the quality of online news sites should be measured. Reviewing academic literature on 'quality of journalism', they present 38 criteria for 'quality' and conduct a survey with 143 editors, producers and executives of online news sites. The results show that Credibility and Utility, respectively, were top-ranked among the participants in the survey. Trustworthiness and Accuracy were also rated highly. These traditional journalistic criteria of quality in news were supported by an evaluation of content criteria. The online media workers rated Content Relevancy, Fact-Opinion Separation and Good Writing as paramount factors for quality journalism. At large, these factors reflect principles that were established in journalism before the advent of the Internet. Web-specific attributes that rated among the top 5 through 7 criteria were Site Organisation and Navigational Tools, Clear Paths and Simplicity in Interface Design. These criteria correlate with the findings of Article 3 in this dissertation⁷, which indicate that Web-media are dependent on these factors in order for the audience to interact with the news sites. Contrarily, the study by Gladney et al. (Gladney, Shapiro and Castaldo 2007) shows that the lowest-scoring aggregate categories of quality were Community Relevance and Interactivity, which might be associated with the major strengths and more innovative possibilities of Web news. However, the discussion in the 'Introduction' section of this dissertation about the impact of technology on online media, the user-directed aspects and the democratic dimension gives further perspective to this discussion. The discussion in Article 1 concerning how online media and the publication practices in Web and mobile media influence the 'quality of journalism'

⁷ See Article 3 in this dissertation.

could also be related to this discussion⁸.

‘Quality’ of journalism is a dimension that is challenging to measure. Various dimensions of journalism and ‘quality’ have been evaluated depending on the approach of the individual scholars seeking to cultivate a measurement. Some emphasise the journalistic methods and processes, others journalists’ ambitions and values or the journalistic (mix of) products. Shapiro (Shapiro 2010) classifies attributes of journalistic works into four disciplinary approaches: 1) the study of journalists’ professional culture, 2) reflection on journalism as an art form best located within the humanities, 3) professional critiques of journalism by journalists and 4) sociological surveys of journalists’ criteria of ‘quality’ and ‘excellence’.

After carrying out a review on scholarly works within each stream, he concludes that:

The frameworks associated with the various existing paradigms are all, of course, intellectually coherent, but each seems either too complex or not sufficiently inclusive to meet a variety of ‘insider’ and ‘outsider’ evaluators’ needs and to allow these various evaluators to speak to one another. (Shapiro 2010)

Shapiro proposes a new structure for the evaluation of journalism works based on rhetorical analysis as a framework for assessing the goals, practice and products of journalism. This evaluation consists of a sequence that follows a path through discovery, examination, interpretation, style and presentation. These stages mirror the producing process of journalistic works within all publishing platforms and are hence suitable as a checklist of best practice. However, the shortcoming of this model is that it requires knowledge about production processes in order to work as an analytical tool, meaning that scholars must have access to this knowledge when

⁸ See Article 1 in this dissertation.

evaluating journalistic products within this model. This might not be the case, either by choice or due to other circumstances, for various research projects. Additionally, in content analysis research projects, this framework could encounter insuperable obstacles.

The various approaches to measuring journalistic quality emphasises different aspects of ‘quality’. Some scholars give prominence and emphasis to ‘formal’ or macro organisational factors, as the contextual framework conditions of media (systems) and journalism production, while others give weight to ‘content quality’ or a micro perspective, referring to the substance of the journalistic products and the execution of production practices.

This division in formal criteria and content criteria is by no means definite, but represent an attempt to separate the more ideological aspects of media’s role in Western democracies from the practical execution of quality journalism. From the scholarly works examined here, I propose that the two dimensions are indistinct, which leads to a blurred discussion on how to measure quality journalism. The different ideologies and practices between international and national media (systems) and within different media types are additionally complicating the task of evaluating ‘quality’. Scholars appear to agree about the majority of the criteria listed above; however, the concrete execution, form and content elements of exemplary quality journalism productions must also be taken into consideration. Article 3 in this dissertation is an attempt to analyse journalistic narratives that are characterised as ‘quality’ off-deadline longform multimedia productions. The criteria discussed above are further developed in that article. ‘Narrative flow’ is another central concept in the articles of this dissertation. I will elaborate on this concept in the next section.

NARRATIVE FLOW

What I say to our team is, I don't want anyone to think about the experience or actively think about what they have to do ... Let the story just flow naturally so that whether they might be reading a little piece and then come down and a relevant video just starts to play simultaneously, something kind of comes in when it's time, it does mean you have to be much more aware of user experience around the story and how that flows ...am.. We don't want to have people have to touch a lot of buttons or open a load of things to kind of get there ... because they just won't do it...⁹ (November 2014)

In this quote from Sinead Boucher, Group Executive Editor, Fairfax Media, New Zealand, she reflects on how she requires the news team to present multimedia stories. The aim is to produce news stories in a form that 'flows' and consequently will maintain audience attention and interaction. With the expression 'flow', she means that the story elements appear 'when it's time' and without 'people [having] to touch a lot of buttons'. This style of 'flowing' multimedia storytelling had its main breakthrough in the New York Times story *Snowfall* in 2012,¹⁰ which attracted 2,9 million users in its first week. This story was the originator of the expression, 'Can we Snowfall this' (Dowling and Vogan 2014), which has since been seen in journalistic and academic vocabulary. To 'snowfall' a news story denotes a multimedia story wherein the story segments are plaited together in a seamless, linear story structure. One of the 16-person team that created *Snowfall*, Amanda Cox, Graphic Editor at the New York Times, reflects on the creation of story flow as:

⁹ Interview with Sinead Boucher, Group Executive Editor, Fairfax Media, New Zealand 2. December 2014, see appendix NN p 8.

¹⁰ <http://www.nytimes.com/projects/2012/snow-fall/#/?part=tunnel-creek>

'Flow in the right way, people still fighting that, people are still figuring out how to do that ... are figuring out how for one thing to flow into the other or making it clear that, you know, sometimes someone has to play the role as a back-up figure, like we are not competing for attention at the same time...'¹¹ (February 2014)

She reflects further that story elements 'must shine' and that 'making the transitions' (between story elements) should 'feel like a coherent piece'. During my research, I interviewed 13 experienced media workers who have produced longform multimedia stories, and one of the focal points in the interviews was how narrative flow is created from their points of view. After a close reading of the data, my observation is that the interviewees communicated very few concrete, carefully planned answers to that question¹². The interview data expose that much of the journalistic multimedia production practice is grounded on experimenting and tacit knowledge, an observation which has also been a finding in other studies within journalism practice (Deuze 2008; 2008; Schultz 2006, 2007). Various textbooks within online and mobile journalism (Bull 2010; Myrthu 2004; Whittaker 2009) are mainly concerned with how to produce content within different media types, how to technically and empirically create multimedia narratives and to a lesser extent, how to create coherence and continuity between story segments.

A literature search in academic databases and journals within journalism and media research¹³ shows that very few studies explicitly address multimedia journalism and narrative flow¹⁴. Engebretsen's works (Engebretsen 2006, 2012, 2013) concern narrative flow in informational multimedia texts and within

¹¹ Interview with Amanda Cox, Graphic Editor at New York Times 27. February 2014, see appendix NN p 11.

¹² See Article 5 in this dissertation.

¹³ Aalborg University Library data base and specific search in Sage Journalism Journals, Taylor and Francis Journalism journals and Google Scholar.

¹⁴ See Article 1 in this dissertation.

journalism, and his studies of photo shows with integrated written texts and music have contributed to the conceptualisation and understanding of how meaning is created in multimodal narratives. Ureta (Ureta 2010) did a study of 30 Spanish Web-only feature stories published in 2006 and 2007 and examined their formal, stylistic and functional characteristics. Hernandez and Rue (Hernandez and Rue 2016) developed a classification based on the narrative structure of journalistic multimedia productions; they suggest a triangle as a graphical solution to identify commonalities and differences in story types. Their taxonomy does not address narrative flow as such, but contributes perspectives on the structure and visual design of multimedia narratives. Hernandez and Rue's taxonomy has been further developed in Article 3 in this dissertation¹⁵.

The concept of 'flow' in journalism studies has been discussed in relation to digital news production processes, news consumption and media convergence (Sheller 2015; Kammer 2013; Adler 2013; Lim 2012; Erdal 2011; Burns 2010, Hermida 2010; Karlsson and Strömbäck 2010). The flow concept of these studies is not concerned with the narrative flow of specific news story items, but rather with factors such as workflows, spreadability of news content and convergence between media types and platforms.

Studies within learning and pedagogy have contributed to the understanding of multimodal communication and story flow in educational multimedia content (Sharda 2007; Engebretsen 2006), and within studies of nonlinear hypertexts and interactive narratives, different perspectives of 'dramatic flow' (Macfadyen, Stranieri and Yearwood 2007) and 'narrative transportation' (Green and Jenkins 2014) have been discussed.

Research in visual communication studies has contributed to the understanding of how people make meaning of digital multimodal presentations (Kress and van Leeuwen 2006; Lemke 2002; Thorlacius 2009). Different textbooks

¹⁵ See Chapter 3 in this dissertation.

(Blundell 1988; Everton 1999; Larsen 2003; Rich 2009) discuss the construction of news stories within specific media types and within multimedia production. The specific characteristics of journalism storytelling (related to real actions and people, balanced coverage, ethical guidelines, etc.) impose restrictions on storytelling possibilities, but the necessity to catch the reader and keep him or her interested in the story is crucial. Typical alternate expressions of ‘narrative flow’ in these publications are ‘the story’s vehicle’, ‘the progression and continuity of the story’, ‘the glue that keeps story elements connected’, etc. In fiction, Busselle and Bilandzic (Busselle and Bilandzic 2008) describe the phenomenological experience of narrative engagement as follows: ‘All of a person’s mental systems and capacities become focused on the events occurring in the narrative’ (Busselle and Bilandzic 2008, 260). The activity of exploring informative narratives and specific journalistic feature stories can be analogous to the activity of engaging with fictional narratives. The ideal object of journalism is to communicate subjects and actions to the general public in a comprehensible and engaging way (Schudson 2003). However, the narrative flow of journalistic stories is not only created through the reader finding escapism in the narrative, but also through the reader’s engagement with the information that is communicated through the specific schema of journalistic narratives. In journalistic stories, the schema is characterised by a semantic and narrative flow described as a rhetoric of clarity and comprehensibility rather than openness, as can be present in fiction, poetry or art (Engebretsen 2012). The definition of narrative flow as explained above¹⁶ is how I address this expression in this dissertation. Furthermore, I make a distinction between narrative flow and narrative structure. Narrative flow is different from narrative structure in that narrative structure refers to the navigational visual design as it is organised (on the web) in the multimedia case studies. Narrative flow refers to the narrative cohesion and tension in this structure and in and between story segments and content of story segments, and consequently the construction of the stories’ progress and its creating of meaning.

¹⁶ See Article 3 in this dissertation for an additional discussion of the concept of ‘narrative flow’.

Having outlined the scholarly context of this dissertation and discussed the notions of ‘quality journalism’ and ‘narrative flow’, I will now continue with a presentation of the research questions, methodology and findings of each of the five articles, and concurrently discuss the research process and progress of the substance of the articles used in this dissertation.

CHAPTER 2. RESEARCH DESIGN, PROGRESS AND FINDINGS

In this Chapter, I will account for the research design of the dissertation and discuss where the dissertation as a whole positions itself in journalism research traditions. Further, I will present an overview of the research questions, methodology and findings in each article. This will be followed by a discussion of the how the research process progressed and how the research question and methodical approach developed over the course of the project.

RESEARCH DESIGN

This dissertation as a whole positions itself in the research tradition of applying mixed methods in a sequential complementary design (Phil-Thingvald 2014; Padgett 2012). The dominant approach is in the qualitative research tradition, employing document review and analysis, textual analysis of media texts and qualitative interviews. The quantitative approach is found in the eye-tracking experiment and questionnaire performed with a group of readers. Figure 1 exposes the research design for the articles in the complete dissertation with reference to the research process progress.

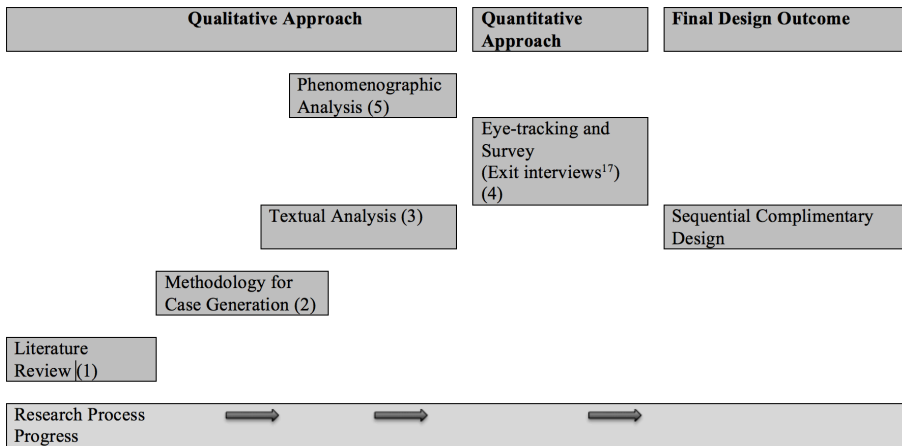


Figure 1: Display of research design for Articles in complete dissertation.

Figure 1 explains the research process progress, from left to right, referencing the chronological order of data generation and analysis of data for each Article in this dissertation. The sequential complimentary design is shown by visually vertically separating the qualitative and quantitative phases of the research. The sequential design is shown by the research process progress; the qualitative phase was conducted first and the quantitative phase second. Complementary methods were employed when qualitative and quantitative data generation and analysis of data took place in separate processes and when the methods were combined in the concluding phase of the research process. In this dissertation, Articles 1, 2, 3 and 5 were produced within a consistent qualitative approach, but in Article 4 (applying the quantitative approach¹⁷), I relate the findings of Article 3 to the findings of Article 4. In doing this, I explore the same empirical data with different methods and thus utilise a more thorough understanding of the phenomenon for investigation. In addition, I conducted exit interviews with the test persons in the eye-tracking experiment (in addition to a survey), so the methods employed within the specific data generation of Article 4 also constitute a multi-strategy approach. Furthermore, the findings in Article 3 guided the research question(s) and assessment of methods employed in Article 4 and thus point at synergistic effects in the mixed method

¹⁷ The exit-interviews with readers I will define here as qualitative.

design with regard to both data generation and data analysis. (Phil-Thingvald 2014, 322).

POSITION IN THE FIELD

As we have seen in Chapter 1's section on 'News Journalism Research', there are different coexisting traditions and approaches within journalism research. Various studies are concerned with the technological, institutional, organisational and cultural impact on digital media as a communication platform, on the content of digital media, on the production of digital media and on the users of digital media (Deuze 2004; Domingo 2008; Steensen 2010). Furthermore, these different fields of research employ various approaches and methodologies. Table 2 provides an overview of these main fields of research, the foremost empirical emphasis thereof, and the methodological approaches and purpose of the studies.

Approach Digital Media Object	Empirical Emphasis	Methodological Approach(es)	Purpose of Studies
Publication Platform	Design, layout, navigation, content forms etc.	Content analysis and textual analysis.	Analyse and discuss the characteristics of digital media.
Digital Content	Content and form of digital media.	Textual analysis of media texts.	Analyse and discuss the texts in digital media.
Digital Production	Production cultures and practices.	Ethnographic studies, qualitative interviews, surveys.	Analyse and discuss the practice of journalism.
Users of Digital Media	The audiences' use and affiliation of digital media.	Survey, focus groups, experiments, diaries, reception studies.	Analyse and discuss the users' interaction with digital media.
 The medias' relationship to users. Ethnographic studies, qualitative interviews, surveys. Analyse and discuss the media producers' strategies and interaction with the audience.
Digital Theory	The theories and methods employed in research in digital media	Reviews of scholarly works, innovation theory, grounded theory etc.	Analysis and development of and testing of theories and methods for studies within digital media.

Table 2: Display of main research fields, empirical emphasis, methodological approach(es) and purpose of studies in digital journalism.

Table 2 discloses a division of the main research fields in digital journalism in five main areas, along with each field's foremost empirical emphasis, methodological approach(es) and purpose of studies.

The majority of articles in this dissertation are positioned in the first four traditions in the table, mainly through an empirical micro-perspective on the different fields of research. The micro-perspective was chosen because I wanted to focus on specific multimedia texts, the practices of production of these texts and the

user interaction with longform multimedia narratives. The micro-perspective enlightens the dynamics of content, content production and user interaction with multimedia narratives, but can also yield an insight into factors on meso- and macro-levels of multimedia performance. (Boczkowski 2004).

The textual analysis in Article 3 is an example of a narrow micro-perspective on two specific multimedia texts in the research tradition of studying the content of digital media. The close reading of multimedia productions as narratives is, according to Tuchman (Tuchman 2002), one of the main research areas within journalism studies. The analysis in Article 3 is filling a gap in contemporary journalism research through the specific focus on the phenomena of ‘narrative flow’ in longform embedded multimedia narratives (see Article 1). However, the analysis also takes the digital publication platform, or the characteristics of the ‘Media’, into consideration through the analysis of design, layout and navigational options. It can be difficult to differentiate between the impact of the new ‘technology’ applied on the media’s website, such as software (Steensen 2010), and the deliberate choices in the production process and the actual presence of content and story elements in the two case studies. To identify the significance of technological constraints and/or opportunities in the production and presentation of the two cases, the study could be expanded through interviews with the production team behind the productions. I have not expanded the study in this direction because the aim of the article was to investigate the two cases as media texts exclusively. I found it more fruitful to expand the study in the direction of the user interaction on one of the case studies. Article 4 is consequently in the tradition of studying user interaction with digital media texts, employed with a micro-perspective on the specific text. I found it especially interesting to explore how the readers interact with this type of narrative because the narrative is constructed as an author-driven embedded multimedia story and thus resembles what Dowling and Vogan (Dowling and Vogan 2015, 212) describe as the ‘urtext’ of the multimedia longform genre. In this, the study of Article 4 tests hypotheses developed from the findings in Article 3 and complements that article’s findings.

Article 5 positions itself in the research tradition of digital production

practices. Unlike the majority of news production studies (Boczkowski 2004; Singer 2004; Domingo 2006; Bock 2012; Karlsson et al. 2015; Thurman et al. 2016), this study focuses on the journalistic practice through the lens of the perception of media workers that produce off-deadline longform multimedia feature journalism. The micro-focus of this article must thus be distinguished from the news cycle focus of many other production studies. The primary focus of the article is the variations of the media workers' perception of the process when producing off-deadline longform multimedia narratives. The processes of production are analysed and categorised according to this specific context wherein technological opportunities and organisational factors play a role but tacit knowledge and work cultures are also significant.

In sum, this dissertation as a whole takes a constructivist rather than a technological determinist approach. The dissertation focuses, in a micro-perspective, on empirical studies emphasising the importance of culture and context in multimedia texts, practices and user interaction. (Domingo 2008; Steensen 2010). In the next section, I will elaborate on the research process for this dissertation, followed with a discussion on how the research question and methodical approach(es) developed over the course of the project.

RESEARCH PROGRESS AND DEVELOPMENT OF RESEARCH QUESTIONS

The first study in the progress of this dissertation was a literature review, 'Multimedia Stories and Narrative Structures in Online Media: A Literature Review', which was conducted with the goal of gathering an overview of published scholarly knowledge in the field of multimedia narratives, focusing on narrative structures and multimedia in journalistic online media with a specific focus on text and video. Additionally, the purpose is to point out shortcomings in existing research and to suggest topics for further research. After presenting the methodological search approach, the review begins with the definitions of central

terminologies that are used in connection with scholarly works on online media; I found it necessary to define these terms because they are used differently in various articles and works. Furthermore, I organised the scholarly works of the review process into three sections. In this process, I analysed each article according to the main subject and discourse of the article and according to which design and methods were employed. I organised the overview thusly:

- Presence of multimedia and video

In this section of the article, the review demonstrates that multimodal storytelling is increasingly present in online news media. The majority of the studies' methodology is quantitative content analyses, and the majority of the studies employ a comparative case study design. These studies reflect the need to generate exact knowledge about the development of content types in online news media. However, in addition to quantifying the presence of multimedia and video, the studies have different research questions, with findings ranging from editorial willingness to experiment to a lack of innovation and editorial strategies.

- Journalism practice and multimedia stories

In this section, the studies demonstrate that while cross-media multimedia production is more likely to happen in broadcast media with affiliated online activities, this practice does not occur regularly. The review also exemplifies the many variables that are brought into play when studying the liquidity of online news and the complexity of the narrative structures in non-linear multimodal and hyper-textual narratives. The aesthetics and design of the different screen-media and printed media are moving towards a visual convergence, and repurposed content and cross-media production take many forms that fit various news topics and situations.

- Video and online media

The studies of video implementation and analysis in online news media present in this section demonstrate both the complexity of analysis of multimodal texts and the diversity of different methods in play. The studies suggest that video stories in online media have other characteristics than those produced by TV journalists, both

in form and content, and that successful communication through writing and/or video relies on knowledge about what content is best suited for the medium.

The review was submitted to the Nordmedia Conference in June 2013, but has since been revised. The length of the article was limited by the requirements for submission. When searching the literature for the review in Article 1, one of the key words was ‘narrative structure’. When I began working on Article 3 nearly a year later, I revised the term ‘narrative structure’ to ‘narrative flow’ and distinguished between the two terms in Article 3. I also did, and have continuously done, new Boolean literature search and review on terms such as ‘journalism AND narrative flow’ and ‘multimedia AND narrative flow’ in databases such as Google Scholar and journals concerned with journalism, but found few relevant scholarly works except those that are referred to in the ‘narrative flow’ section above and in Article 3.

In the closing of the article, from the findings I conclude that although multimedia content is increasingly present in online media, the implications and effects on narrative structures have yet to be investigated thoroughly, and that stories that merge different media forms in an longform integrated aesthetic have therefore yet to be observed and analysed extensively in qualitative studies. I also suggest areas for further research. With this in mind, I have added two questions to my analysis to include gaps in scholarly works that I observed at this stage of the research process. These questions are: ‘How do design, navigation and content influence the narrative structures and story flow of multimedia news items?’ and ‘Is there some mix of combined content, media types and presentation techniques that work better than others?’ These research questions were later solidified in four research questions when I was working on the analysis of the case studies in Article 3. In qualitative research processes, this development of elaborating on less specific research questions in order to formulate more specific questions is a commonality. The entity or phenomenon under study emerges throughout the course of the study, and this surfacing can bring the study closer to a concrete focus. VanWynsberghe and Kahn (VanWynsberghe and Kahn 2007, 84) formulate this process as the

following:

‘Researchers can generate working hypotheses and learn new lessons based on what is uncovered or constructed during data collection and analysis in the case study’. (VanWynsberghe and Kahn 2007).

The concretisation of the research questions in Article 3 was consequently the result of my reflections during the work with Article 2 and the analysis of the data in Articles 3 and 5.

The following work was the article ‘Informationsorienteret caseudvælgelse og den usædvanlige nyhedshistorie’ (‘Information Orientated Case Selection and the Exceptional News Story’) In Article 2, I discuss how a typical case selection for qualitative research on case studies can develop. The article describes and discusses the process from researching the gap in scholarly works to formulating a research question and finding a case study that is suitable for the specific type of analysis that the researcher decides to execute. From the very start of the production process, the article was suggested for the peer-reviewed anthology ‘Selektion’ that was scheduled by the ‘knowledge group’ (vidensgruppe) MÆRKK at Aalborg University. The anthology is a collection of articles that presents various approaches to a selection of cases with different substance(s) and for different research purposes. The form and content of the article are therefore guided by the editors’ requirements and responses. In retrospect, the process of completing this specific assignment was a very fruitful learning experience. During the research and writing process of this article, I established the main theoretical perspectives that were applied in the analysis in Article 3.

The research question for Article 2 was: ‘How can I generate a media text that is suitable for its purpose? (Hvordan udvælger jeg en medietekst til dette formål?)’ However, the article also elaborates on the research questions I suggested

for further research in Article 1. The purpose of finding the media text (case study) is to analyse the case regarding how continuity and narrative flow is created in online multimedia narratives, and which role is constituted in the text-video relationship. (Hvordan skabes der kontinuitet i online multimediehistorier, og hvilken rolle spiller i den forbindelse forholdet mellem tekst og video?) In the article, I employ a concrete example and explain how I generated one of the case studies that is the object of the comparative analysis in Article 3.

The article discusses in detail how the different phases of the case-generating process can progress and what circumstances, reflections and choices might influence the procedure. In the section ‘Selection of case’ (Udvælgelse af case), I discuss theoretical and methodical aspects of the generating process, and in the section ‘The Case: Last Call’ (Casen; ‘Sidste ud kald’), I present arguments and reflections on the selection of the concrete case study. The section ‘Outline of analytical approach’ (Skitser til en analysetilgang) provides an outline for analytical approaches and methods. Additionally, in the article, I present a visual illustration of essential selection procedures in the research process. Figure 2 displays the essential selection processes within the case study research approach.

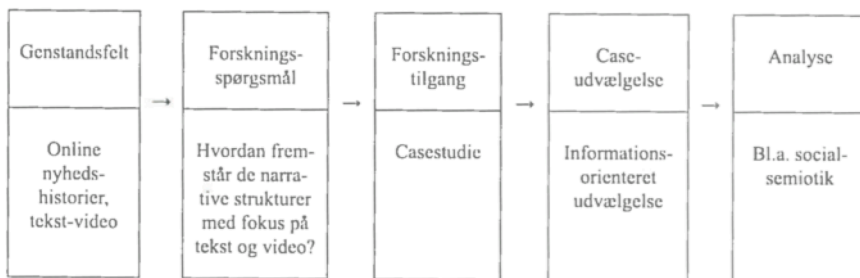


Figure 2: Display of essential selection processes within the case study approach.

Furthermore, the article discusses limitations in the case study research approach and proposes additional research perspectives that can illuminate the phenomena behind how continuity and narrative flow are created in online multimedia narratives. When working on Article 3, I decided to implement the proposed

methodical approach, visual social semiotics, but extended the scope of the analysis to also include structural and visual navigational factors as well as journalistic content features. This development in the research process demonstrates that the research process might not always progress on a linear course. As previously mentioned, the research question might be modified or revised during the research process in order to establish that the field of research, phenomena, case study (or studies) and methodology are coherent and in correlation with the research question.

The third article ‘Narrative Flow in Longform Journalistic Multimedia Feature Narratives’ is guided by a case study research approach. It consists of a comparative analysis of the visual navigational structure, and a design and textual analysis of two longform multimedia feature narratives. The article is directed by the main research question: How is the narrative flow of longform journalistic multimedia stories constructed? To explore this question, I propose the following four research sub-questions:

The visual navigational structure is investigated through the questions:

RQ1: How is the overall visual presentation and navigational design performed to create narrative flow?

RQ2: How is the visual design and presentation regarding text and video segments executed to create narrative flow?

The content structure of the multimedia stories is investigated through the question:

RQ3: How do the perspectives of text and video segments influence the narrative flow?

The perspectives of the content elements refer here to the point of view of the sub-stories, which is to say the perspective from which the single story element is communicated.

RQ4: How do the functions of the text and video elements influence the narrative flow?

The functions of the content elements are established through the single elements overriding functions of information, identification and fascination.

The main research question in this article is concretised into a clear overriding question that has been elaborated into four sub-questions. The process of departing from a proposed research question in the literature review (Article 1) via the proposed research question in the methodological reflection and discussion on case study research (Article 2) to the final concretisation has been an unsteady course. Nevertheless, when searching for the case studies and determining how the unit of analysis (cases) was determined, I could slowly identify which factors were essential. This process in case studies research is expounded upon by Baxter and Jack (Baxter and Jack 2008, 554): *'As in any other qualitative study the data collection and analysis occur concurrently'*. As my studies and implementation of theoretical perspectives in the analysis of the cases progressed, I gradually gained clarity about the affordances of multimedia presentation and communication and the impacts these affordances could have on the narrative flow. I believe that the final four research questions are formulated thoroughly and manageable for analytic generalisation. When discussing analytic generalisation, Yin (Yin 2013, 327) states that:

'At the same time, the strongest empirical foundation for these generalizations derives from the close-up, in-depth study of a specific case in its real-world context'.

The methodology employed in the Article is, from Yin's perspective, a 'close-up reading, in depth study' of the two case studies. The theories employed for the analysis are visual and textual analyses with the implementation of various theoretical perspectives dependent on which affordances are being analysed (Hernandez and Rue 2016; Thorlacius 2009; Kress and van Leeuwen 2006; Engebretsen 2006, 2012; Fabricius and Roksvold 2004; Holm 2007).

Multimedia news narratives can take many forms, structures and visual designs. Hernandez and Rue (Hernandez and Rue 2016) have developed a taxonomy of journalistic multimedia narratives grounded in user perspective. In the article, I suggest a developed version of this typology, which takes the author's perspective and intentional reading path into consideration. This developed model presents a typology that incorporates mutually exclusive archetypes, which is not the case in Hernandez and Rue's model.

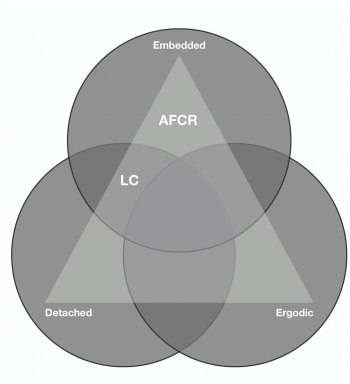


Figure 3: Modified typology of Hernandez and Rue's (Hernandez and Rue 2016) triangle model of multimedia story types with superimposed placement of the two case studies.

The model shows a triangle with one of the three archetypes of multimedia news stories – Embedded, Detached and Ergodic – placed in each corner. The circles represent how different combinations of the archetypes might emerge as mixed forms. The two case studies analysed in the article are placed within the model (AFRC and LC). AFRC was categorised as a linear, author-driven, embedded, multimedia news feature story, and LC was categorised as a linear, author-driven, embedded, multimedia news feature story with elements of detached structure. This modified typology is based on ideal types and generalised forms, and is not meant to be exhaustive; instead, it is intended to represent ideal forms against which individual cases and genres might be compared.

The overall visual presentation and navigational design, along with the visual design and presentation regarding text and video, were investigated through RQ1 and RQ2. In relation to RQ1, I found that in the two case studies, the narrative flow features both cohesion factors and tension factors. The overall sequence structure provides an author-driven path that potentially guides the reader through the story in a near-linear progress. The two case studies have different design and structural solutions, but the analysis demonstrates that the visual design and structure is consistent and distinct in both stories.

For RQ2, the analysis reveals that the different story elements' placement on the site, framing, salience, use of colour and the content of video thumbnails are factors that can conceivably affect the reader's interaction with the story. The employment of these features is divergent in the two case studies, as is the suggested reading path. The organisation of story elements signals cohesion through a more integrated, author-driven and linear path in one of the cases than it does in the other. The findings emphasise the possible influence that these factors might have in the reader's interaction process with multimedia stories.

The content structure of the multimedia stories was investigated through the perspectives and functions of the text and video elements of the two case studies. The findings of RQ3 and RQ4 show that in the chosen multimedia feature stories, the story elements occupy different perspectives and functions that generate a multifaceted cognitive reading experience, which enhances the reader's interaction with the story content. It is in the 'mix' of the different 'voices' that a jointly tuned interaction is created in front of a computer screen (Kress and van Leeuwen 2006). The interplay between content with different perspectives and functions potentially creates both proximity and distance, and hence a varied reader experience. Tension in the narrative flow occurs when different perspectives and functions deliver double communication through presenting the same perspective, function and use of oral sources in different sub-stories with different media types in the same story. A pattern could also be found in the two case studies where body text and video clips were assigned different perspectives and functions. The body texts predominantly

implement a top-down perspective, which functions with a rhetoric of information, and the video stories predominantly apply an eye-level perspective with the content function of identification and fascination.

The four research questions stated in this paper were investigated through visual and textual analysis. Through the findings of the analysis, it appears clear that the structure, design and content variables that have been included in the two textual analyses are relevant and applicable to the purpose of identifying factors that create cohesion and tension in the narrative flow of longform linear, author-driven embedded multimedia news narratives. Table 3 summarises the findings of the study.

	Cohesion factors	Tension factors
Structure	Transparent navigation Logical arrangement	Unclear navigation Inconsistent organisation
Visual design/Layout	Consistent Clear priority of elements Appropriate salience and framing Thorough implementation of colours Inviting thumbnails	Inexpedient Confusing priority of elements Arbitrary salience and framing Random implementation of colours Uninviting thumbnails
Content	Deliberate choice of content for media type Purposeful management of story elements' perspectives and functions Considerate of choice of talent in story elements	Random choice of content for media type Unintentional management of story elements' perspectives and functions Extensive repetitive use of talent in story elements

Table 3: Summary of cohesion and tension factors between text and video elements in linear author-driven multimedia narratives.

Table 1 discloses the central findings of this study, which are cohesion and tension factors in structure, visual design, layout and content structure, and content features. By carrying out an in-depth, thorough textual analysis on two longform case studies, I believe I have contributed to a deep understanding of the how the narrative flow is performed in linear, author-driven, embedded multimedia news features.

The two case studies that are analysed and discussed in this paper are longform linear, author-driven, embedded feature stories. This type of online news story is a legacy of the printed press. Both stories are text-driven with indented video (and graphic) elements, organised in story parts or chapters designed to be experienced in a specific order. The fundamental story form is not extreme or advanced compared to single media stories that are constructed with a continuous reading path. The story types ‘detached structured multimedia story’ and ‘ergodic structured multimedia story’ occupy more unpredictable reading paths, which would challenge the applied methodology in this article. Future studies on the narrative flow of multimedia news stories could thus focus on non-linear, reader-directed and reader-driven narratives. The effects of technological innovations and changes on journalistic practice and journalism storytelling are factors that also warrant further investigation. Although the phenomena studied here were investigated through a snapshot of a field undergoing permanent evolution, I believe that, within its limitations, this study contributes to the existing knowledge about narrative flow in longform multimedia stories.

Article 4, ‘They Never Made It to the End. Reader Uses of a Multimedia Narrative’, is a complimentary study to Article 3. The study was conducted after the visual and textual analysis was performed in Article 3, and one of the case studies employed in Article 3 was the object of the study. Furthermore, the findings in Article 3 guided the research question(s) and assessment of methods employed in Article 4. How does a group of readers respond to the structure, visual design and narrative flow of a multimedia narrative? Are readers following the course that an author-driven linear reading path suggests? This study investigates these questions through an eye-tracking experiment, a survey with the test persons and exit

interviews with the test persons. The following research question and hypotheses were proposed:

RQ1: How does a group of readers respond to the structure, visual design and narrative flow of the presented multimedia narrative (AFCR) constructed within an author-driven linear reading path?

H1: Readers of a linear embedded multimedia story prefer to interact with the text in the chronological order suggested by the author-driven reading path, from top to bottom and left to right.

H2: Readers prefer visual elements over text(s) in embedded multimedia feature stories.

H3: Readers follow navigational icons, such as lines, arrows, links and paratext on the web site.

In the experiment, I observed that three of five participants behaved as methodical readers and that two of five acted as scanners. Due to the small scale of the eye-tracking experiment, I will characterise the results of the analysis and discussion as tendencies rather than generalisable findings¹⁸.

The eye-tracking experiment did reveal that the linear structure of the story, with body text and indented graphics and multimedia elements within a single subsection, functions as intended. Hypothesis 1 is supported by the saccades and fixations, because the participants followed the narrative flow through a reading path from top to bottom and from left to right, which matches the findings of the Poynter Eyetrack03 study and the findings of Nielsen (Nielsen 2006). Although this study finds that the test subjects focused more often on the body text than on visual elements, Hypothesis 2 is partly supported in the study. All the test subjects viewed the first video, four of five watched the slide show and three of five viewed the second video. Since the analysed part of the story is dominated by body text, the test

¹⁸ See Article 4 for further discussion and findings.

subjects' attention was drawn to this element due to its prominence in the story's layout (Kress and van Leeuwen 2006).

Concerning the layout and visual navigation, participants tended not to recognise the navigational structure and design between story parts. The patterns of user behaviour showed that in spite of four different navigational options, four of five of the participants disregarded the possibility of moving on to the next part of the story. Hypothesis 3 can therefore not be confirmed by this study. The lack of connection between the visual design and the participants' interaction with the story indicates that the narrative flow between story parts does not function as intended by the producers. This experiment revealed that there are considerable tension-factors in play in the AFCR story when it comes to overall visual navigational design between story parts. The tendency observed was that the gap was simply too demanding for the news readers in the experiment to bridge (Engebretsen 2012).

I believe that despite the relatively small sample of participants in the experiment, the tendencies that were observed are relevant and effectively interpreted because each participant's data has been thoroughly researched and triangulated. Compared with Poynter's studies, the participants in this study perused a single narrative for about 20 minutes, where Poynter in *Eyetrack07* exposed a large sample of test persons to six stories with more than 350 specific elements over the course of 90 minutes (see also Nielsen et al. 1993). The studies are not directly comparable; Poynter's studies primarily focus on news website navigation and not on the navigation of a single 'standalone' longform multimedia feature story.

Through previous close reading and analysis before the eye-tracking experiment, the navigation between parts and chapters was found to be intuitive and logical without major tension factors in the AFCR story. The findings of the eye-tracking experiment led to different conclusions regarding the overall visual navigational design compared to the previous textual analysis. These divergent conclusions show not only that different methods and research goals lead to different results, but also that both a close reading and textual analysis and eye-tracking

experiments have limitations when it comes to relating to real world media experiences and concerning the experience of a specific group of participant volunteers in an experiment. The sequential complementary design in Article 3 and Article 4 is an attempt to respond to these shortcomings.

My purpose in the research was to investigate the overall visual design and narrative flow. The case study in this eye-tracking experiment is a longform ‘standalone’ feature story presented without commercials and other news stories or content competing for readers’ attention. This was not the case for the case studies of most other comparable eye-tracking studies. Compared to the research of news websites that employs eye-tracking experiments, this study represents a new phenomenon for investigation. It is also especially interesting to explore how the readers interact with this type of narrative because the narrative is constructed as an author-driven embedded multimedia story and thus resembles what Dowling and Vogan (Dowling and Vogan 2015, 212) describe as the ‘urtext’ of the multimedia longform genre.

Within a chosen (Flyvbjerg 2006) narrative, there are many factors that could be studied in detail, for instance how the readers perceive pictures, graphics and video that are integrated in the text. Additional studies are needed to increase the understanding of how narrative flow is created and opposed. More studies could feature other aspects of news storytelling and utilise other methods in the understanding of visual navigation possibilities and narrative flow in embedded multimedia narratives. The ongoing digitalisation in media outlets and the experimentation and development of journalistic products may benefit from research addressing multi-methodological approaches.

In the article 5 ‘How do they do it? Longform Multimedia Journalism and Perception of the Practise’, I move from the focus on the visual and textual analytical approach and audience perspective to the journalistic production perspective. The article is based on a phenomenographic analysis of qualitative interviews with experienced media workers who work with or manage work within

longform online multimedia journalism in mainstream online international media outlets.

The research question this paper seeks to answer is the variations in how experienced journalists, editors and graphic designers understand how longform multimedia journalism is carried out in an off-deadline context, while a sub-focus is the study of the variations of how the media workers perceive the creation of narrative flow in longform multimedia narratives. In the outcome space, I categorise six different variations of perceptions describing collective approaches to multimedia production. The categories of perceptions are assigned different metaphors, and these metaphors are structured in dimensions of variations from the highly multifaceted to the less so. Figure 4 presents the outcome space of the phenomenographical study.

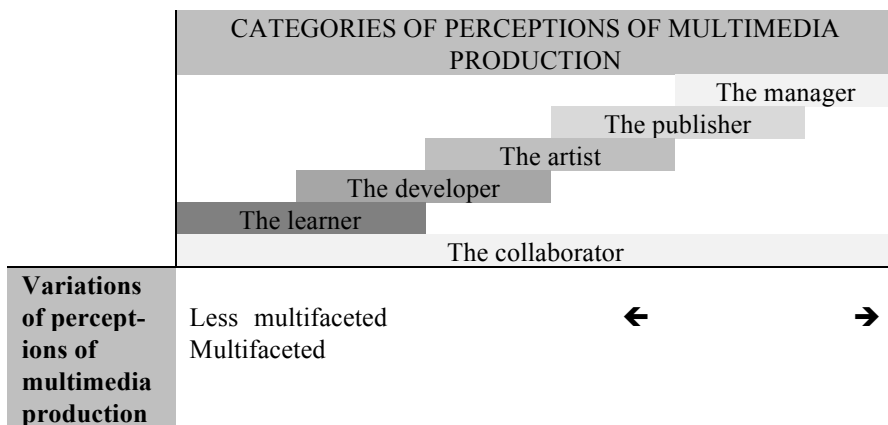


Figure 4: Outcome space of dimensions of variations of the perception of multimedia production.

The outcome space vertically shows a hierarchy of variations of perceptions of multimedia production from the learner to the manager. The collaborator's position in the hierarchy is visually placed at the bottom, but should be understood as a metaphor that works across all the categories. Horizontally, the visualisation shows how the categories of perceptions are related on a scale from less to more multifaceted.

Phenomenography as a research approach originally evolved from an educational and learning framework and has since been applied in various lifeworld experience studies. I argue that the approach is suitable for journalism practice studies because journalism and similar professions are a continuous learning process, and the findings of the phenomenographic research process can contribute to the understanding of how and why media employees carry out their work the way they do. The six variations of perceptions of multimedia production are concrete, applicable categories of conceptions that illuminate the field of journalism practice in an off-deadline context. Unlike most other studies on journalism practice with an ethnographic/qualitative approach, this study employs a phenomenographic research methodology¹⁹. Phenomenography seeks to describe the variations in human meaning, understanding and conceptions – or ways that people understand or make sense of the world. Its aim being to find and systematise forms of thought in terms of how people interpret aspects of reality (Marton 1981, 180). Both phenomenography and phenomenology are based on a lifeworld perspective and have the same underlying ontological and epistemological assumptions. Phenomenology seeks to study the variations of the essence or the inner core of people's lived experience of the phenomenon being studied in order to discern what makes it what it is (Larsson and Holmstrom 2007). Phenomenography takes a second order perspective that is not about describing the essence of the phenomenon or its meaning, but rather the variations in the different ways people understand, conceive of or experience the phenomena (Marton 1981). The aim of the article is in line with this, seeking to identify the variations in perception of longform multimedia production. By doing so, the attempt of the study is to contribute a new perspective to the examination of how media employees perceive the journalistic practice. Karlsson and Clerwall (Karlsson and Clerwall 2011) concluded in their study that news sites are deeply situated in an institutional professional culture wherein traditional journalistic preferences and forms of publishing are the yardstick guiding developments rather than performing any brave experiments in innovation.

¹⁹ See Article 1

In contrast, Thurman and Lupton (Thurman and Lupton 2008) studied the implementation of multimedia content in nine British media outlets and found a high degree of experimentation in mainstream news providers' approaches to multimedia, with no clear certainty of what would fail or succeed. These studies are not directly comparable with this study due to the different phenomena selected for investigation, but the findings in this study are more convergent with Thurman and Lupton than with Karlsson and Clerwall's study. The participants in my study expressed a high degree of willingness to experiment with the form and content of multimedia narratives, but they also expressed uncertainty of how to make the stories work.

In following the findings of this study, I point to three possible implications for further research, both for the media institutions that produce journalistic multimedia stories and for journalism education.

1) The categories of perception can potentially influence how competencies are developed and how institutions might change or broaden the repertoire of interaction in the newsroom.

2) Comprehending different ways of seeing the work process and how knowledge, skills and other attributes are developed and maintained in work performance can influence how multimedia production is implemented and organised in editorial rooms.

3) The phenomenographic approach can be employed to map different phenomena, allowing researchers to use the conclusion(s) in educational situations in both academia and continuing professional development. Both students and professional media workers need interpersonal skills and consciousness about the variations in how media workers understand their lifeworld, and to be able to open up to new ways of perception and consequently progress and work in new ways.

In this chapter, I have outlined the main research design, position in the field, methods, and data collection and findings in the five articles in this

dissertation, followed by a discussion of the how the research process progressed and how the research question and methodical approach developed over the course of the project. In Chapter 3, the five articles are presented in full²⁰. The five articles will be followed by a discussion of the findings, my conclusions and commentary on the relevance of this dissertation.

²⁰ The citation system and article styles in the five articles are diverse due to different requirements from Authors, Journals and Conferences.

CHAPTER 3. ARTICLES

ARTICLE 1: MULTIMEDIA STORIES AND NARRATIVE STRUCTURES IN ONLINE NEWS MEDIA: A LITERATURE REVIEW

MULTIMEDIA STORIES AND NARRATIVE STRUCTURES IN ONLINE NEWS MEDIA: A LITERATURE REVIEW

Kate Kartveit and Ole Ertløv Hansen

ABSTRACT

This research looks into the scholarly works within media and journalism studies concerning narrative structures in onlineⁱ news media. The purpose is to gather an overview of published knowledge in the field and to discuss the future possibilities of executing an analysis of narrative structures in multimedia stories with a focus on text and video in online news media. The paper originates from a literature-based research methodology of the most commonly used journals and articles within the research area. The results show that few academic works thorough address studies of narrative structures and storytelling strategies in multimedia.

Keywords: Journalism, literature review, multimedia, narrative structures, online media, storytelling, video.

INTRODUCTION

Imagining a life without Internet or your mobile phone is an exacting task. Since the

introduction of the Internet in the 1990s, online²¹ news media has become a key actor in the social, cultural and economic life in countries around the world. Research (Chyi and Chadha 2011) shows that nearly half of the population in the Western hemisphere are daily users of online news. Deliverers of online news, placed opposite traditional modes of news media (print, broadcast), are characterised by their ever-changing, multimodal and participatory nature. Written texts, sound, photo, video, graphics, animations and hyperlinks merge into multimodal narratives that constitute different forms of storytelling and narrative paths. The purpose of this paper is to point out shortcomings in existing research through a literature review on scholarly works concerned with narrative structures of multimedia stories in online news media. In this review, we will account for the methodology used for the literature search, follow this with a review and a discussion of the findings and then propose issues for future studies.

METHODOLOGY OF LITERATURE SEARCH

The main research question of this article concerns how research on narrative structures in online news media is addressed in works of media and journalism studies. The population of the study in this article originates from a literature-based research methodology, taken from peer-reviewed articles and papers. With few exceptions, only English language works are included in the study, and searches were limited to the time period of 2000 to 2013. The works included in this review were identified by different search methods. Electronic databases such as Scopus, Academic Search Premier and Google Scholar were used for Boolean searches on keywords, synonyms of the keywords and different combinations of keywords such as the following: video/multimedia narrative/stories, narrative structure/storytelling, online/mobile media/news/journalism, media/news room/convergence, cross-media, liquid news, MoJo, online/mobile media, journalism practice/products. The results of these searches varied to a great extent. Some keywords and Boolean variations yielded hundreds of hits, while more specific searches gave a few or zero hits. The result of the searches demonstrated that the terms and characterisation of phenomena

and actions within works concerning multimedia journalism (storytelling) in online news media are not concurrent in the different databases, journals and articles. This may be caused by the fact that works emanate from diverse research traditions and methodological approaches, various journalistic practices or media-specific studies (print/broadcast).

Second, various Citation Indexes were searched for relevant articles, and the reference lists of articles found were searched for additional works. Some academic journals were investigated more thoroughly than others, i.e., Routledge's Journalism Studies and Journalism Practice and Digital Journalism and Sage's Journalism, Electronic News and New Media & Society and Convergence. Articles from these journals populate the majority of the material in this review.

This review emphasises more recent contemporary works over providing a historical overview (see Chapter 1 in Summary of this dissertation for a more historical context and review on journalism research). The findings in this review are not exhaustive; they represent an assortment of selected works with various methodological approaches and traditions as opposed to a complete picture of the field.

THE FINDINGS OF MULTIMEDIA STORYTELLING IN ONLINE NEWS

Studies on online news media have seen a substantial growth in the period from 2000 and onward, which are included in this review. Ethnographic studies in editorial environments, qualitative interviews with operators in the branch, qualitative and quantitative content analysis of online media products, surveys on different aspects of online media production and market situations and studies of user behaviour are some of the various methods and approaches used. This review will focus on works concerned with content in online news media and more specific works that address multimedia storytelling, video stories and narrative structures in online news media.

DEFINITIONS

Convergence, cross-media production, interactivity and multimedia journalism are widely used expressions in scholarly literature addressing the realm of new media development and content production. These terms are keywords in the literature about online media, and thus it is necessary to define these expressions.

Cooperation and collaboration between formerly separate newsrooms is generally defined as *convergence* (Deuze 2007, 140). Steensen (2011, 217 citing Gordon 2003) describes five aspects of convergence: ownership, tactics, structure, information gathering and presentation. Dailey et al. (2005, 151) describe convergence journalism in five overlapping levels, placing convergence on a dynamic continuum that contains different stages of cross-promotion: cloning, competition, content sharing and full convergence. The term *de-converging* (Tameling and Broersma 2013) is introduced to describe the separation of an online newsroom (back) into print and online sections.

Cross-media production is generally defined as media content that travels from one media platform to another, which requires some form of translation/adaptation or re-purposing of the content and cross-media ownership or cooperation (Deuze 2005, Erdal 2009). Many studies on online journalism content have traditionally been concerned with three assets of digital technology: hypertext, interactivity and multimedia (Deuze 2003, Engebretsen 2006, Seelig 2008, Steensen 2010). Others (Pavlik 2000, Karlsson 2012) have analysed online news for further characteristics and suggested immediacy, contextualisation, ubiquity, hypermedia, user-generated content, participatory journalism, citizen journalism, memory and personalisation and crowdsourcing/nursing. Steensen (2010) has categorised and reviewed works on hypertext and interactivity and found that these additional assets can be treated as concretisations of hypertext and interactivity. This review uses Steensen's understanding of hypertext and interactivity and regards them as an integrated part of the concept of narrative structures and multimedia storytelling, arguing that hyperlinks and interactive elements can be regarded as storytelling building blocks in multimodal news stories.

One characteristic of online media is the user's ability to interact with the media text; the user can choose which story elements to pursue or which path to follow (albeit within a fixed structure) and thereby construct unique narratives or story connections. In this way, the user becomes a co-author of the work. *Interactivity* can be defined as 'the degree to which a communication technology can create a mediated environment in which participants can communicate both synchronously and asynchronously, and participate in reciprocal message exchanges' (Karlsson 2010, 3, citing Kiousis 2002, 372). Deuze (2003) organises interactivity options into three subdivisions: 1) Navigational: The user can navigate through the sites' content; 2) Functional: The user can participate to some extent in the production process of the sites; and 3) Adaptive: The user's action/surfing behaviour has consequences for the content of the site, as the site's programming adapts itself and 'remembers' users' preferences. Others (Chung 2007, Larsson 2012) use a continuum of medium, human/medium, and human interactivity to examine audience uses of the three types of interactive features in online news media.

Hypertext is generally defined as a computer-based, non-linear group of texts (written words, photos, video, animation, etc.) that can be electronically interconnected with hyperlinks (Engebretsen 2006, 5). Hyperlinks can refer *internally*, to other material within the text's domain ('onsite'), or *externally*, to texts located elsewhere on the Internet ('offsite') (Deuze 2003, 212). Interactivity is often referred to as interactive elements (or links) that exist within a story package, while hyper-textual links describe links to stories and elements that go outside the narrative (Ureta 2010, Jacobson 2012).

Karlsson and Clerwall (2011, 551) define *multimedia* as two or more modalities of content or types of content that cannot be presented in an analogue newspaper. Vobic (2011) finds many ways of formatting multimedia news in scholarly works, but in most contemporary academic writings, multimedia stories are defined as stories that include text and either audio, video, interactive

graphics/maps, animations or photo slide shows—or a combination of these assets. In line with contemporary articles, this last definition will be used in the review.

The limited space and static layout of printed news along with the linear nature of the traditional broadcast medium have enhanced the notion that online news is freed from the constraints of traditional news media. There are no space limitations or definite deadlines. Instead, the online publishing sphere offers multiple options for varying perspectives, forms and modalities, allows targeting tactics for reaching audiences, and can create personalised paths for surfing, among other possibilities. This new realm of online news production has been predicted as the prospect of creating a ‘new journalism’ and a new way of covering events. However, one must ask whether online media outlets use these communication possibilities to their full potential.

The option of multimodal representation of news stories in online media demands that journalists and editors have the multiple skills required to produce and implement multimedia elements or stories. The WWW’s and mobile net’s multimedia potential relies on the journalist to choose the media communication form(s) for a particular story or to produce content for the same story for different platforms. Online media parented by traditional media (print, broadcast) generally reuse or repurpose content from the ‘old’ media for new, online media. Boczkowski (cited by Steensen, 218) lists three different forms of content creation in the transition from offline to online media: repurposing, recombination and recreation. However, the current developments in online media show that cross-media houses have implemented different strategies for content production on different platforms, and that more stories are being produced exclusively for online publishing (Jacobson 2012). In the following sections, we will present the results of the selection of works that the literature search has produced. The first part investigates how multimedia and video are present in online news media.

PRESENCE OF MULTIMEDIA AND VIDEO

Online media outlets have, in theory, the ability to publish advanced multimedia stories, but a state-of-the-art look reveals that the resources and capability may not be present. Jacobson (2012) evaluates 25,000 multimedia packages published on The New York Times' website from 2000 to 2008. A selection of 2% (479 items) of the total packages from each year was taken for content analysis, and each story was analysed according to its narrative characteristics, storytelling perspective, interactivity, hyperlinks, presence of social media tools and relation to the print version of the newspaper. The results show an extensive growth in multimedia presence on nytimes.com, from a few hundred items in 2000 to nearly 7,000 in 2008. Most of the multimedia packages in the study are categorised as 'features', or 'soft' companion pieces to stories in the print version. Overall, 59.9% of the multimedia items used a third-person perspective, while 44.8% of interactive features and 29.1% of video narratives employed a first-person perspective instead, a development that might indicate that multimedia journalism is more centred around personal stories than its printed sibling's journalist-centred reporting. Jacobson finds that photo slideshows were more likely to be produced in conjunction with newspaper stories, while video narratives were more frequently produced as standalone stories. She found that the video narratives showed much more diversity in form than in mainstream broadcasting news. Interactive features (infographics) increasingly used game-like presentations and simulations, but the study found no evidence of user influence on editorial products. In transcoding journalism from print to Web, Jacobson identifies a standard multimedia repertoire, but also an increased sophistication in multimedia presentation. This indicates the presence of a willingness to experiment with editorial approaches and products.

Thurman and Lupton (2008) are also optimistic on behalf of the innovation in online journalism. They used qualitative interviews with nine senior editors and heads of media departments in the UK (three broadcast and six newspaper-based) to explore the adoption of multimedia and video storytelling in mainstream news. In

the study, they found that the speed and extent to which the changes were taking place was dramatic. Different convergence levels and solutions were implemented in the various media houses as technology and business models were tested, and although the informants disagreed about the need for journalists to be multi-skilled, some journalists were trained for multiple journalistic activities. Most media outlets preferred in-house production of video rather than syndicated material, suggesting the need for at least some of the staff to manage video production equipment and editing tools. The study revealed a high degree of experimenting in mainstream news providers' approaches to multimedia, with no clear certainty of what will work or fail.

A somewhat opposite finding concerning innovations in the media was found by Quandt (2008). In a comparative content analysis of ten mainstream markets leading online news media in five countries (Europe and USA), he investigated whether the presentations contained advanced multimedia features and interactive possibilities. His findings show that the mean share of 84.5% of the news items did not carry any multimedia elements, with BBC UK (online) leading his comparison with approximately 46% of the published stories including multimedia components. This can likely be explained by BBC's ability to repurpose audio and video material from broadcast activities. Options for interactivity were also shown to have relatively low mean numbers, with email feedback (13.5%) and links to forums (15%) having the highest score. Hyperlinks were most frequently used for linking inside websites (73.5%), indicating a strategy of trying to keep traffic within the site itself. Quandt concludes that the 'whole new journalism' that was predicted in early research, when the technological and journalistic options of online media were first analysed, did not happen. The websites that were analysed have a similar formal structure, lack multimedia content and options for interacting directly with the editorial staff and have a relatively standardised repertoire that focuses on national political events. These findings are supported in a Nordic study by Engebretsen (2006, 11). He analyses the lack of innovation through a model of genre theory and development in mass media where infrastructure factors and instrumental and social

affordances are included.

The findings of Karlsson and Clerwall (2011) are similar to those of Quandt. They did a longitudinal research project on the development and implementation of multimedia in four Swedish online news sites between 2005 and 2010. The results of the content analysis show that the share of multimedia content increased on all sites, both the two sites parented by tabloid newspapers and the two broadsheet-based news sites. The multimedia content changed over time, going from mean numbers of 3.25% in 2005 to 25% in 2010. Technological improvements and developments in media production and publication facilities are some of the explanations for this development, but the need for branding and the desire to satisfy users constantly acquiring more advanced and user-friendly computers, tablets and mobile phones are also represented in the findings. TV/video was the dominating (85% in one instance) multimedia element on the websites. Journalists in the study stress that Web-TV is not a copy-production of broadcast TV, but that multimedia enhances their storytelling capabilities and makes journalism better. Karlsson and Clerwall conclude that ‘news sites are deeply situated in an institutional professional culture where traditional journalistic preferences and forms of publishing are the yardstick guiding developments rather than performing any brave experiments in innovation.

Vobic’s 2011 ethnographic study of two Slovenian print media organisations with affiliated online activities concludes that there is a lack of vision in furthering the evolution of online media. The two case studies have different historical contexts and newsroom organisational models (decentralised and centralised), a fact that has implications for how multimedia and cross-media productions are integrated. Nevertheless, common to both cases is the lack of a meticulous strategy for the future direction and development towards a convergent multimedia newsroom environment.

The studies in this section demonstrate that multimodal storytelling is increasingly present in online news media. The majority of the studies’ methodology

is quantitative content analyses, and the majority of the studies employ a comparative case study design. These studies reflect the need to generate exact knowledge about the development of content types in online news media. However, in addition to quantifying the presence of multimedia and video, the studies have different research questions, with findings ranging from editorial willingness to experiment to a lack of innovation and editorial strategies. An overview of the studies included in this section is shown in Table 1.

Researchers	Method	Design
Jacobson (2012)	Quantitative content analysis	Case study
Thurman and Lupton (2008)	Qualitative (in depth) interviews Issue-focused method (Weiss)	Comparative case study
Quandt (2008)	Quantitative content analysis	Comparative case study
Engebretsen (2006)	Quantitative and qualitative content analysis (Genre theory)	Comparative case study
Karlsson and Clerwall (2011)	Quantitative content analysis Qualitative interviews	Comparative case study
Vobic 2011	Ethnographic analysis	Comparative case study

Table 1: Studies of presence of multimedia and video in online media.

JOURNALISM PRACTICE AND MULTIMEDIA STORIES

The question here concerns whether broadcast media and print media execute different strategies when it comes to content production on facilitated online media outlets. Seelig (2008, 96) examined 282 Web newspapers, 112 radio station websites and 128 TV station websites in the USA and found that online newspapers lagged behind in providing multimedia content. Meanwhile, TV station websites were more likely to accompany news content with video clips (49.2 %) and radio websites were more likely to provide sound clips (62.5%). A quantitative study of the Norwegian Public Broadcaster, NRK, (Sjøvaag, Moe and Stavelin 2011, 95) showed that video files were integrated into 12% of the online, text-based stories, indicating that

although the broadcasters have access to video material across platforms, it is not necessarily implemented in the production workflow of online journalistic texts.

Jannie Møller Hartley (2011) found that the journalistic and editorial decisions on Web publishing among traditional print media organisations are characterised by a radicalisation of time and technology. Thus, the concepts of breaking news and exclusive news have become the main competition tool for online news media. ‘Liquid news’ and ‘fluid news’ are commonly used terms for describing the ever-changing, user-influenced and border-crossing nature of online news (Domingo et al. 2008; Karlson 2012, 385; Saltzis 2012). The demand for immediacy and constantly updated news stories in online media has been substantiated in several ethnographic studies within journalism work environments (Buczowski 2004). A story can start with a short notice of an event or subject and be updated with photos, video or other storytelling elements during the day.

Saltzis (2012) did a study of six UK online news sites (four sites hosted by print media and two hosted by broadcasters). The aim of the research was to examine what kind of changes news stories undergo, with a focus on breaking news stories. By focusing on the actual change in the content over short periods of time, he also examined the techniques used by journalists. One of the key findings was that most updates happen within the first couple of hours (60 %) and that stories were very seldom kept updated beyond one day. The editorial choices made favoured the production of new stories within the topic, with new angles and sources. Saltzis also found that most updates were text-based, with only 22% of the changes featuring audio-visual material. Furthermore, he found that broadcasters’ websites tended to update more frequently and with fewer words than the online newspaper websites, and that the availability of new sources triggered most of the changes (64%).

Karlsson (2010, 2012) suggests a method for content analysis of liquid online news: recognising the importance of not only how an online news story is told, but also where on the Web page or in the Web universe it is published. He

claims that most studies within online journalism address immediacy and updates in news stories and thereby disregard the multi-component process of news production. Since liquid news changes, it poses challenges to the traditional content analysis that treats content as definite. He suggests that the methodological approach must incorporate the four sub-characteristics of liquid news—the dimensions of user-participation, immediacy, multimedia and hyperlinks—and should consist of multiple points of analysis over time. In his exploratory study, he introduces four variables: different versions of news stories, accuracy problems related to immediacy, adding or removing user participation (interactivity) and adding or removing photos, multimodal material or hyperlinks. He employs this method on four Swedish online newspaper sites (two tabloid and two broadsheet) by downloading and/or recording screenshots of the 15 top stories on those sites every 10 minutes for 3 hours, and later at 17.00, 23.00 and at 9.00 o'clock the next morning. His findings are extensive, but can be summarised thusly: the study shows that different versions occurred on all sites, all sites had an accuracy issue, the media did allow user influence (submitting photo, polls, chats, comments and blog links) in some cases and multimodal material was included in some of the stories. Karlsson concludes that this study demonstrates that any content analysis of online news must take the continuous, capricious participation, multimodality and interconnected process into consideration, and that the word 'published' is being challenged.

A study that explores the use of non-linear, hyper-textual and multimedia storytelling in depth is executed by Ureta (2010). She presents a case study of three 'quality' Spanish newspaper websites and examines the formal, stylistic and functional characteristics of 30 Web-only feature stories published in 2006 and 2007 as 'specials'. Through the terms 'composition' and 'structure', she investigates the case studies and finds a mixed form of hyper-textual structure. By visualisation through graphic diagrams, she identifies a host of microstructures that are accessed via links on the 'Web special' site. These structures show an arboreal character with three-four nodes, which extend in multi-lineal and parallel ramifications or sequences of levels, achieving significant levels of vertical and horizontal depth.

These structures are interconnected and frequently repeated in size and complexity. In the study, ‘sidebar’ links, (hyper-textual links) or links to elements outside of a story, outnumbered ‘embedded links’, or links within a story (87% to 13%). The number of links to audio, video or multimedia elements is extensive (54%), and in only one of the cases – that of ElPais.com – is there cross-media cooperation with TV/Radio publishers. Ureta considers the case studies as the maximum expression of hyper-textuality, and compares this structure with a collage where the final meaning of each block, or subunit, is included in the hyper-textual ensemble.

TV-broadcast media with connected online or mobile platforms evidently has an advantage when it comes to the capability for cross-media production and publication of multimedia packages with video content. For decades, traditional TV-networks’ news stories have merged sound, video, photo, text (supers/subtitles), graphics and animations in communication with the viewers. Cooke’s (2005, 42) longitudinal study of visual convergence in print, television and Internet demonstrate the development towards a videographic presentation style in television news. Television news shows (CNN) have adapted the look and feel of the web, she claims, and this mixing of structural and storytelling elements creates a scannable design that transcends traditional media boundaries. Erdal (2009) investigates this media convergence further. In his study of the Norwegian public service broadcaster, NRK, he analyses the cross-media production process through multiple media platforms (radio, TV, Web). He approaches the analysis of forms of cooperation and repurposing of content through the parameters of rhetoric, genre and adaption, and he outlines six different typologies of repurposed content. These typologies range from the reframing and/or containing of archive material (sound/video) on the Website to the production of advanced, merged packages with a division of labour between different media and editorial sections, allowing for publication of different versions on all media platforms. Erdal suggests that, rather than describing different, overlapping levels of convergence ending with ‘full convergence’, it is more useful to use the term ‘smorgasbord’, meaning that different levels of cross-media cooperation fit various news topics and situations. He suggests

a model for analysing cross-media journalism with two axes that operate simultaneously: the work axis and the content axis. The work axis represents the cross-media practises, from single-reporter-multiplatform journalism to cross-media coordination to multiplatform orchestration. The content axis describes three different ways content is transferred across media platforms, with increasing amounts of journalistic work involved: the rhetoric of argumentation, the rhetoric of re-versioning and the rhetoric of recombination.

The studies in this section demonstrate that while cross-media multimedia production is more likely to happen in broadcast media with affiliated online activities, this practice does not occur regularly. The studies also exemplify the wide range of variables that is brought into play when studying the liquidity of online news and the complexity of the narrative structures in non-linear multimodal and hyper-textual stories. The aesthetics and design of the different screen-media and printed media are moving towards a visual convergence, and repurposed content and cross-media production take many forms that fit various news topics and situations. An overview of the studies included in this section of the review is shown in Table 2.

Researchers	Method	Design
Seelig (2008)	Quantitative content analysis	Comparative case study
Sjøvaag, Moe and Stavelin (2011)	Quantitative content analysis	Case study
Hartley (2011)	Ethnographic methodology	Comparative case study
Saltzis (2012)	Quantitative content analysis	Comparative case study
Karlsson (2010, 2012)	Quantitative content analysis (exploratory, grounded theory)	Comparative case study
Ureta (2010)	Qualitative content and message analysis, semi-structured interviews	Comparative case study
Cooke (2005)	Qualitative content analysis	Comparative case study
Erdal (2009)	Ethnographic methodology	Case study

Table 2: Studies of journalism practice and multimedia stories in online media

VIDEO AND ONLINE MEDIA

As the above research demonstrates, video, featured animations and interactive visualisation of data have slowly become a part of the typical content in online news. Unlike facts or ideas, which are intangible and constructed entirely in language, moving images and animations are constructed both discursively and materially. Innovative formats such as animations are typically adopted as a way to visualise an event for which there is no video footage, or to present visual illustrations on abstract issues in news production. A study by Cheng and Lo (2012) showed that melodramatic animation formats neither enhance nor decrease the credibility of news. They suggest that the credibility of a news organisation is more dependent on the organisation itself rather than on the format used to present its content. Interactive data visualisation is frequently used for an analysis of 'big data' stories, such as election prognoses, budget forecasts or illustrative maps.

As software for analysing data has become easily accessible and user-friendly, more journalists have begun to integrate data visualisation into their narratives. Segel and Heer (2010) explore the design of five online stories that implement narrative visualisation, identifying techniques for telling stories with data graphics. The design space contains three divisions of features and affiliated sub-features: genre (seven basic genres), visual narrative tactics (structuring, highlighting and transition guidance) and narrative structure tactics (ordering, interactivity and messaging). Two different archetypes of stories are identified, and these lie along a spectrum of extremes. First, there is the Author-Driven story, which has linear ordering of scenes, heavy messaging and no interactivity. Second, we have the Reader-Driven story, which displays no descriptive ordering, no messaging and free interactivity. Most stories in the dataset of the study use a mix of the two approaches. The study raises questions about the complexity of the methodology design when analysing interactive visualisation narratives, equally concerned with narrative structures, interactivity, highlighting technique, transitions and user experience.

Traditional broadcast TV news stories operate within more or less fixed

forms, structure and aesthetics. Guidelines and templates for storytelling and best practice are widely implemented in the journalistic processes in fields such as public service broadcasting (Holm, Kartveit and Svith 2011, 47-77). Online news media, however, may attempt to experiment with different forms and content of video-stories. Until recently, most journalists employed in online media parented by mainstream print media have been trained for print media themselves (Bock 2012, Jacobson 2012). Mitchelstein and Buczkowski claim that ‘the literature in the field of journalism studies is largely informed by the standards of research, education, routines, rituals, and practices set by print journalism’ (2009, 562). Bock (2012, 600) found that online newspaper journalists are responding to the challenge of using video in news production through claiming a distinct form of multimedia presentation, thereby sustaining their place in the journalistic hierarchy. With the theoretical framework of Pierre Bourdieu, Bock investigates the way newspaper journalists maintain professional distinction as they adapt to a new habitus (print journalists producing video for the newspaper’s website). The study is based on observational and interview data and textual analyses of video stories produced by video journalists (VJ). Her research is based on 11 observational sites: 66 interviews with US VJs and 13 newsroom managers who work with VJs. Bock found that news videos produced by former print journalists have other characteristics distinct from those displayed by TV journalists. Web videos are longer and use more mimetic (visual) narrative technique, closer to the style of documentary filmmaking, compared with traditional TV-news items that mostly operate on a diegetic (oral) storytelling level. Print journalists’ self-understanding of this practice is that by maintaining a distance from TV-news, they are maintaining their identity as the more serious, authoritative and fact-oriented news workers.

Erdal (2009) also finds that the journalistic hierarchies alternate, as there is an emerging division between those reporters that are assigned to do unique stories and those online journalists who mainly maintain updates and new developments in previously produced or re-purposed stories.

One of the few experimental video studies found in the search for this

review investigates *hyper-video* (Aam 2012). Hyper-video resembles how hyperlinks work in online environments. In an experimental design using proprietary technology, journalistic content was tested on 20 test users. Samples were produced with 3 main videos and 17 affiliated stories that were clickable from inside the main video. The test user could either choose to watch the main video uninterrupted or to click on the icon for a specific sub-topic addressed in the main video. If the latter choice was made, the main video would pause, and then continue when the sub-video was finished or stopped. The aim of the project was to investigate if this new form of communicating news via video stories could strengthen the quality of journalism (in Public Service TV). The test subjects were generally positive about video stories and informed researchers that they had learned more than with traditional TV-news items, and reported that the function of interactive elements was ‘engaging’. However, they also said that the clickability was confusing and difficult to navigate.

Hedley’s (2012) qualitative research on the work of one award-winning solo video journalist (Delozier) develops a structured, multimodal semiotic analysis of how the solo video assigns meaning. The story was broadcast on the TV and published on the Web. Using Rodriguez and Dimitrova’s (Hedley 2012, 69) model of four levels of visual framing, he coded each of the 38 visual frames for discourse, subjectivity and/or context (described by Jensen in Hedley, 69). He analyses the story on four levels: Signs as Denotative Syntactic System, Signs as Stylistic Semiotic System, Signs as Symbolic Systems and Signs as Ideological Representations. In this specific case, Hedley finds that the video journalist extends his role from the visual to the social realm and describes the solo video journalist representation as *social moments* in contrast to still photographers’ works. He argues that video as a multimedia tool can bring a more experimental style of storytelling to journalism.

A study by Martyn (2009) partly supports Hedley’s findings and concludes that if it is used judiciously by a journalist with sufficient experience, there is some hope that solo video journalism (or mobile journalism) may result in journalism

enriched with multifaceted storytelling.

Engebretsen (2006) argues that when written text, speech, photo, video and graphics are combined and integrated into online texts, what is produced is not only a convergence of media forms, but also a convergence of semiotic systems, reading conventions and rhetorical patterns on a fundamental level. He discusses how written text and video represent the world in different ways. While writing refers to the world (real or fictive) and communicates semantic information, video seeks to show the world and is a more aesthetic medium. He explores the differences between the two types of media through forms of representations, basic units of syntax, grammar, structuring principles and reception. When adapting the two modalities to a Web-based integrated communication design, he argues that one must look at the structural particularities of the two media. Writing is especially suited to general summaries, precise assertions and the communication of abstract issues, while video is specifically fitted for more detailed descriptions of people and situations, and provides aesthetic information with tableaux and atmospheres. He suggests a design example of integrated text-video format where user conventions from paper media are adopted and developed.

The studies of video implementation and analysis in online news media present in this section demonstrate both the complexity in analysis of multimodal texts and the diversity of different methods in play. The studies suggest that video stories in online media have other characteristics than those produced by TV journalists both in form and content, and that successful communication through writing and/or video relies on knowledge about what content is best suited to the medium. An overview of studies about video in online media is presented in Table 3.

Researchers	Method	Design
Cheng and Lo (2012)	Reception study	Exploratory study
Segel and Heer (2010)	Qualitative content analysis	Comparative case study
Bock (2012)	Ethnographic methodology Qualitative content analysis	Comparative case study
Aam (2012)	Reception study	Explorative study
Hedley (2012)	Qualitative content analysis (Semiotics)	Case study
Martyn (2009)	Qualitative text analysis	Case study
Engebretsen (2006)	Qualitative text analysis (Semiotics)	Explorative study

Table 3: Studies of video content in online media

DISCUSSION AND CONCLUSION

This literature review has shown that technological changes, aspects of journalistic practices and democratic dimensions have influenced the developments in the content of online news media. While this study has its limitations, the following conclusions can be drawn. Changes in communication form and content have certainly occurred since legacy media entered online platforms. This review has found patterns of innovation in that the frequency of video and multimedia elements have increased and different types of user-driven content are increasingly present. Nevertheless, although the presence of video, multimedia and graphic elements has increased, written words still populate the majority of the content in online media. Although the technology is available, few online news organisations use the interactive, hyper-textual and multimedia opportunities in the online communication and publishing sphere to their full potential. These studies exemplify how journalistic practices interfere with content in online media while also highlighting the complexity of the methods that are in play when executing an analysis of cross-media production and multimodal stories.

Changes are occurring both rapidly and slowly and are dependent on technological development (software), resources, education, changes of practises among editorial staff and the users' willingness to continue to rely on online news media when different user-payment systems are being implemented. Studies on 'breaking news' and editorial updating practices show that liquidity in news communication generally occurs within the first hours of an event. Cross-media productions take different forms in diverse media houses and the aesthetics of different media platforms merge into a more graphic and visual presentation style. Video produced by print-trained journalists tends to utilise a different aesthetic style and storytelling technique than video produced by TV-trained journalists.

This literature review has demonstrated that various methods and approaches have been implemented in the scholarly works concerning narrative structures in multimedia and video storytelling in online news media. Content analysis, ethnographic approaches and semiotic analysis are at play, but explorative studies and grounded theory approaches are also present. The review demonstrates the uncertainty of comparative studies between countries with different media systems, journalistic traditions and policy. It is difficult to do comparable long-term studies in a field with rapid changes and with a range of different, complex factors that can influence the generated research material. The studies do confirm that multimodal stories and video are slowly being implemented in online journalistic works, but these have yet to become a substantial, integrated part of the published material composing the bulk of online news media. Stories that merge different media forms in an integrated aesthetic without depending on users to click on storytelling elements have yet to be observed or analysed extensively.

The content in online news media is rapidly changing and the industry is continuously experimenting with the form and function of different storytelling techniques, elements and navigational paths. The implications and effects of these changes on narrative structures have yet to be investigated thoroughly in qualitative studies. Thus far, scholarship has yet to study the narrative structures of content travelling from a computer-based platform to that of a media tablet or mobile phone,

and there is also a dearth of information as far as studies on storytelling in content exclusively produced for communication for these assets and their differing user navigation faculties. How can visual analysis applications be extended in order to enable analysis of liquid and multimodal storytelling in online journalism? What does visual convergence and design mean for future design trends and perception of journalistic stories? How are design, navigation and content influencing the narrative structures and story flow of multimedia news items? Is there some mix of content, media types and presentation techniques that work better than others? Does the technological development open up new opportunities and versions of storytelling that have not yet been seen in online media?

The convergence of legacy media and online media is still in its early stage. The development of ‘the whole new journalism’ that was predicted more than a decade ago has yet to come fully to fruition. The centralised, one-to-many, fixed format, highly controlled and authoritative features of traditional mainstream news media have, to some extent, been implemented in the new online arena, but it is a complex task to separate the influence of technology development, journalistic traditions and practices and policy of the media institutions on the content production. When studying narrative structures and storytelling in online news media, one risks a discussion about whether it is technology that chiefly affects the form and content of online media stories, if it is journalistic tradition and practices, if it is organisational and economical conditions or if user behaviour largely impacts content production. Multidisciplinary studies could be necessary to overcome this challenge.

NOTES

ⁱ The term “online media” is here used as a common term for online and mobile media.

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**ARTICLE 2: INFORMATIONSORIENTERET CASEUDVÆLGELSE
OG DEN USÆDVANLIGE NYHEDSHISTORIE**

NICOLAI JØRGENSGAARD GRAAKJÆR &
IBEN BREDAHL JESSEN (RED.)

SELEKTION

– OM UDVÆLGELSE AF
MEDIETEKSTER TIL ANALYSE

MÆRKK – ÆSTETIK OG KOMMUNIKATION

NR. 04

cases
metodedesign
sampling
metadata
stikprøver
optælling
medievisualisering
folksonomier
collageproduktion
pilotstudier

MÆRKK

systeme ▶

Kate Kartveit

Informationsorienteret caseudvælgelse og den usædvanlige nyhedshistorie

Nyheder kan karakteriseres som en genre inden for medietekster, og formen og indholdet er i nyhedstekster kendetegnet ved en række formelle sproglige og æstetiske træk (Vobic, 2011). Journalistik formidlet gennem traditionelle medier (fx avis, tv og radio) har egne og medieafhængige konventioner for, hvordan historierne formidles (Blundell, 1988; Larsen, 2003). En artikel i en avis bygges således op efter nogle narrative skabeloner, der er udmøntet gennem mere end hundrede års praksis (Van Dijk, 2009, p. 176). Ligeledes konstrueres for eksempel et nyhedsindslag på tv i forhold til flere typer 'fortællemodeller', afhængigt af indslagsets genre og målgruppe (Kartveit, 2006).

Online multimediehistorier (Deuze, 2004), hvor skrevne ord (tekst), fotografier, video, animationer, grafik, hyperlinks og brugerrespons integreres i en og samme medietekst, er en forholdsvis ung nyhedsformidlingsform. Denne form for nyhedsformidling fik særlig opmærksomhed som journalistisk fortælleform med *New York Times'* historie "Snowfall" i 2012¹ (Dowling & Vogan, 2015). Efterfølgende har en række internationale og nationale nyhedsmedier i stigende grad publiceret online multimediehistorier. Denne relativt nye fortællelogik vil jeg analysere gennem et case-studie. Men før jeg kan påbegynde en analyse, må jeg generere et analyseobjekt. Hvordan udvælger jeg en medietekst til dette formål? Dette kapitel fokuserer på, hvordan jeg ved informationsbaseret udvælgelse finder en (eller flere) passende medietekst(er), som jeg vil benytte i en efterfølgende analyse.

1 Jf. <http://www.nytimes.com/projects/2012/snow-fall/#/?part=tunnel-creek>.

Informationsorienteret caseudvælgelse og
den usædvanlige nyhedshistorie

Foreliggende forskning og forskningsspørgsmål

Kvantitative indholdsanalyser af udvalgte online nyhedsmedier har påvist, at antallet af multimediehistorier, hyperlinks og mulighed for brugerindflydelse er øget de sidste ti år (Karlsson & Clerwall, 2012; Seelig, 2008). Der synes dog at være enighed om, at udviklingen i brug af onlinemediets multimediepotentiale er forholdsvis lav. Kvalitative studier (Thurman & Lupton, 2008; Ureta, 2011) konkluderer, at online journalistik er præget af, at præsentationsformen udspringer fra skriftlige medier, og at indhold og form derfor ikke er udviklet specifikt til præsentation online. Der savnes altså en 'indfødt' online journalistik, som benytter hele den palet af narrative muligheder, som medieplatformen tilbyder.

Formidlingsformerne og æstetikken på online nyhedsplatforme er imidlertid i udvikling (Jacobson, 2012; Karlsson & Clerwall, 2012; Seelig, 2008; Steensen, 2011). Feltet er derfor interessant at undersøge, og der eksisterer en række fænomener inden for feltet, som endnu ikke er belyst. Der savnes blandt andet teori og analyser, der behandler fortællestrukturer i online nyhedshistorier og i særdeleshed i multimediehistorier, som altså inkluderer forskellige tekstelementer (fx tekst, fotografi, lyd, video) i samme narrativ. Der findes ganske vist nogle få studier, som omhandler aspekter af konstruktion af historier i relation til online nyhedsformidling, og de væsentligste af disse skal i det følgende kort identificeres.

Engelbrechtsen (2012) analyserer en lineær case, en historie bestående af en introducerende tekst, sammenredigerede stillbilleder og lyd bestående af interviewbidder og realityde. Han introducerer en analyseramme relateret til tre dimensioner ("material", "semantic", "performative") af bruger-tekst interaktion rangeret på en skala fra "cohesion" til "tension" (Engelbrechtsen, 2012). Segel & Heer (2010) undersøger fem nyhedshistorier, der indeholder forskellige visualiseringsformer af datastøttet journalistik. De klassificerer historierne narrative struktur på en skala spændende fra den ekstremt redaktørstyrede fortælling med en lineær opbygning og ingen interaktivitet til den læserstyrede fortælling uden en klar indholdsrekkefølge og med stor grad af interaktivitet. Knox (2009) analyserer udviklingen af strukturen i tre nyhedsmediers hjemmesider i perioden 2002-2006 og konkluderer, at over tid er nyhedsteksterne blevet kortere, og hjemmesidernes design præget af flere visuelle udtryk. Bock (2012) anfører, at når tidligere avisjournalister producerer online videohistorier, så fremstår

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Jack, 2008 i sammenligning med VanWynsberghe & Khan, 2007). Der eksisterer således flere forskellige typer casestudier, der benytter forskellige metodologier og teorier samt uensartede indsamlingsprocedurer, analyser og tolkning af data. Men der synes at være enighed om, at casestudier giver mulighed for at gå i dybden med materialet, og at udvælgelsesstrategien i casestudier må være formålsbestemt og systematisk for at sikre pålidelighed i forskningen. Det inspirerer til, at jeg inden for variationen af forskellige typer casestudier, metodologier og analysestrategier søger at lave et forskningsforløb, hvor selektion af case og begrundelse for anvendelse af teori bliver gennemført systematisk og konsekvent. Det indebærer bl.a., at de metodevalg og det design, jeg vælger, skal kunne passe til og give mulighed for at besvare det givne forskningsspørgsmål. Et andet forskningsspørgsmål ville kræve anvendelse af andre metoder og forskningsdesign.

Formålet med at benytte et casestudie i min undersøgelse er at opnå indsigt i og forståelse for det fænomen, jeg vil undersøge. Gennem caseanalyse bevæger jeg mig altså fra at have lidt kendskab til at have mere kvalificeret kontekstbundet viden om fænomenet (Flyvbjerg, 2010, p. 468). Flyvbjerg (2010, p. 475) redegør for to forskellige hovedstrategier for udvælgelse af cases; tilfældig udvælgelse og informationsorienteret udvælgelse. Tilfældig udvælgelse benyttes som regel, når man ud fra et stikprøveudvalg har til hensigt at generalisere. Det betyder, at størrelsen på samplet, eller mængden af indsamlet materiale, er afgørende for, om generalisering er mulig, fordi udvælgelsens formål netop er at tilvejebringe repræsentativitet i materialet. Ved informationsorienteret udvælgelse selekteres samplet eller casen ud fra forventningen om et bestemt informationsindhold, og typisk vil samplet bestå af et lille udvalg eller enkeltstående cases. Den eller de cases, jeg leder efter, skal indeholde specifikke egenskaber (både tekst og video), og det leder mig mod en informationsorienteret udvælgelsesstrategi. Casestudier af få analyseobjekter har ganske vist gennem videnskabshistorien været kritiseret for at fremstå 'uvidenskabelige' med den hovedbegrundelse, at man ikke kan udlede noget generelt på baggrund af enkeltstående eksempler (Brinkmann & Tangaard, 2010, p. 19). Denne kritik, der kan forbindes med et positivistisk hypotetisk-deduktivt videnskabssyn, er især kommet til udtryk inden for naturvidenskaberne og nogle samfundsvidenskabelige traditioner, hvor kvantitative metoder generelt har stået som det ideelle undersøgelsesperspektiv. Undersøgelserne

gengivet ovenfor omhandlende den stigende tendens til at bruge flere typer tekstelementer i online nyhedsformidlinger er et eksempel på denne form for forskning. Kvalitativ forskning på den anden side *kan* have, men har altså ikke altid, det formål at udsige noget generelt om et fænomen, men kan også fokusere på at belyse og forstå komplekse sammenhænge i det udvalgte materiale. I de seneste årtier har man kunnet se et paradigmeskifte inden for den akademiske verden, hvor kvalitative metoder nu hyppigere benyttes i kombination med kvantitative metoder og omvendt (Brinkmann & Tanggaard, 2010, p. 19). Man kan overordnet sige, at mens kvantitativ forskning arbejder med statistisk generalisering, arbejder kvalitativ forskning med analytisk generalisering (Yin, 2013, p. 326).

En bredt anlagt kvantitativ undersøgelse af mange online nyhedshistorier synes ikke egnet til at belyse det fænomen, som jeg vil undersøge, fordi jeg ønsker at nærstudere forholdet mellem tekst og video ved brug af kvalitative metoder. Jeg søger således ikke at give generaliserbare svar på kvantificerbare størrelser. I forhold til selve selektionsprocessen er det et væsentligt forhold, at et tilfældigt udvalg af online nyhedshistorier ikke nødvendigvis vil besidde det fænomen, som undersøgelsen fokuserer på. Jeg ønsker netop at undersøge et specifikt fænomen i dybden, og hvis fænomenet ikke optræder i materialet, kan undersøgelsen ikke gennemføres. Hvis jeg fx valgte at inkludere online nyhedshistorier i en kvantitativ undersøgelse, ville det være svært at forestille sig, at en optælling af antal tekster og videoer ville kunne sige noget om, hvordan tekst og video spiller sammen. Det synes altså svært at kvantificere data i forhold til narrative strukturer og forholdet mellem tekst og video i online nyhedshistorier, fordi et sådant studie i min undersøgelses optik kræver næranalyse af materialet. Mit formål med undersøgelsen er jo at analysere, hvordan der skabes sammenhæng (eller kontraster) mellem tekst og video i narrativer i online nyhedshistorier. En kvalitativ analyse af en eller flere konkrete online multimediehistorier forekommer mig derfor at være den mest hensigtsmæssige og bedst egnede metode med henblik på at generere viden om dette fænomen. Om resultatet af casestudiet er generaliserbart er i første omgang ikke interessant i denne sammenhæng, for ved at undersøge denne type medietekst kan jeg måske komme nærmere et svar på, hvordan der skabes kontinuitet, sammenhæng og/eller kontraster mellem tekst og video inden for samme nyhedshistorie. Hvis denne tilgang kan give svar på dette, er formålet med studiet opnået.

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Udvælgelse af case

I casestudiet kan undersøgelsesobjektet variere fra en hændelse, et koncept, en proces til en konkret medietekst eller en ide (Jensen, 2013, p. 96). Typiske kvalitative metoder til at generere cases er observation, dybdeinterview, eksperimenter og tekstindsamling og kombinationer af disse. For de tre første metoder, observation, dybdeinterview, eksperimenter, genereres data på forskerens initiativ. Forskeren 'skaber' de cases, som hun vil analysere, og vælger, med hvilke metoder hun vil indsamle og bearbejde materialet. Jeg ønsker at studere en medietekst, som allerede findes, så det synes oplagt, at disse case-genereringsmetoder ikke er aktuelle i mit tilfælde. Til tekstanalysen finder og selekterer forskeren ved hjælp af forskellige udvælgelsesprocedurer dokumenter og tekster, som hun vil analysere og/eller generere teorier ud fra. Disse udvælgelsesprocedurer vil variere i forhold til, hvilken type medietekst der eftersøges. Hvis medieteksten er en konkret bog af en nulevende forfatter, er det i de fleste tilfælde en ukompliceret sag at finde analyseobjektet. Hvis medieteksten er et historisk dokument fra oldtiden, kan processen være mere besværlig. Jeg vil finde en online nyhedshistorie, og den procedure, jeg benytter, indledes ved, at jeg søger bredt på internettet med henblik på at få et indledende indtryk af, hvad der findes af den medieteksttype, som jeg interesserer mig for.

Jeg vælger en dansk konceptuel ramme for min undersøgelse. Det fænomen, jeg vil undersøge, er karakteriseret ved en tæt forbindelse mellem 'indhold og form': Hvad der bliver formidlet, og hvordan formidlingen foregår, er sammensmeltet i selve medieteksten. Det kan derfor være hensigtsmæssigt, men ikke en nødvendighed, at jeg også kender til de historiske, politiske og sociale forhold, historierne omhandler, selv om det primært er svaret på, *hvordan* historierne er konstrueret, der har min interesse. På den anden side kan 'distance' til det indhold, man skal undersøge, i nogle tilfælde være en fordel, da man som udenforstående kan observere uden på forhånd at være væsentligt forudindtaget eller have dannet sig en mening om indholdet i det, der skal undersøges (Boolsen, 2010, p. 210). Selv om jeg som forsker vil forsøge at studere fænomenet i et ikke forudindtaget perspektiv, vil min livsverden kunne påvirke de vurderinger og analyser, jeg foretager. I mit tilfælde skal jeg undersøge en journalistisk tekst, og her kan jeg argumentere for, at det er en fordel, at jeg kan forstå konteksten, teksten indgår i. Det kan jeg, fordi jeg lever i Danmark og arbejder inden for et fag, der fordrer, at jeg holder mig orienteret om sam-

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fundsspørgsmål. Jeg har derfor almen viden om de fænomener, teksten omhandler. Det gør mig i stand til at tolke teksten i den samfundsmæssige sammenhæng, den er produceret i og for. Det kan for eksempel være af betydning for både produktionen og senere tolkningen af den konkrete tekst, hvor den er publiceret, idet der dermed er impliceret en defineret målgruppe, som sandsynligvis er anderledes, end hvad der måtte gælde for andre publikationskanaler.

I løbet af juli og august måned 2013 søger jeg mere målrettet i landsdækkende danske online nyhedsmedier. Jeg vælger primært at søge i de medier, som er defineret som 'landsdækkende dagblade' i mediedatabasen Infomedia, dvs. 10 medier² samt DR og TV 2. De fleste nyhedsmediers websites har klikbare vinduer eller overskrifter i menulinjen på forsiden betegnet for eksempel "video", "TV", "Tema"/"Magasin" eller "Baggrund", som formodes at føre videre til den type af journalistiske produktioner, jeg søger. Jeg bruger også boleansk søg, som muliggør kombination af nøgleord gennem brug af modifikatorer, fx "OG" og "ELLER" mellem ordene. Jeg søger på forskellige stikord som fx "multimediejournalistik", "multimedie nyheder/historier" og "features OG video" og "tv OG tekst". Jeg søger også efter omtale af historier og/eller links på professionsbaserede websites som journalisten.dk og multimediaforum.dk og brancheorganisationernes websites som fx Danske Dagblades website. I takt med at jeg finder historier, laver jeg en liste med links og en kort beskrivelse af historiernes indhold og form.³

Mens jeg søger efter en case, vurderer jeg, om de medietekster, jeg finder, besidder det fænomen, jeg vil undersøge. I forskningslitteraturen (Baxter & Jack, 2008; Yin, 2003) beskrives som nævnt forskellige typer casestudier, og der findes forskellige terminologier, som beskriver variationen inden for disse studier. Den specifikke type casestudie, man vælger, er afhængig af formålet med studiet. Er hensigten at beskrive en case, forklare sammenhænge, sammenligne forskellige cases, eller har studiet et eksplorativt formål og/eller flere af disse – eller helt andre formål? Jeg vurderer, at den case, jeg vil finde, skal være egnet til at undersøge et bestemt aspekt af en

2 Her er fravalgt blade, der henvender sig til mere specifikke målgrupper, fx *Effektivt landbrug* og *Kids News*.

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bestemt type medietekst: Medieteksten skal analyseres for at undersøge betydningen af forholdet mellem tekst og video. I mit tilfælde er det altså medieteksten og et aspekt heraf, der i sig selv er interessant, og ikke fx hvorfor eller hvordan den er blevet produceret i den journalistiske praksis.

Men hvor mange cases skal jeg bruge? Er det tilstrækkelig med én case for at kunne udsige noget kvalificeret i forhold til forskningsspørgsmålet? Eller skal jeg vælge en komparativ tilgang med det formål at sammenligne forskellige cases, som for eksempel måtte være væsensforskellige på en eller flere dimensioner? Disse dimensioner kunne for eksempel være tekstens omfang, journalistisk genre, forskellige temaer og design. Der findes ikke et generelt gældende svar på dette. Hvordan udvælgelse af 'fundne' tekster finder sted, må vurderes i forhold til det spørgsmål, teksten skal bidrage til at give svar på. Jeg kunne for eksempel udvælge cases i forhold til et specifikt emne eller tema, for eksempel "miljø" eller i forhold til en specifik person, for eksempel "statsminister NN". Et andet alternativ kunne være at inkludere et eller flere andre aspekter. Jeg kunne foretage søgning i forhold til en bestemt tidsperiode og i den forbindelse undersøge, fx hvorvidt dækningen af et bestemt emne har ændret sig over tid. En tredje mulighed kunne være at søge i specifikke publiceringskanaler, hvis mit forskningsspørgsmål inkluderede bestemte hypoteser om, at denne faktor havde betydning for karakteren af formidlingen af et givent emne eller udformningen af et bestemt aspekt. I forhold til det aktuelle forskningsspørgsmål (jf. indledningen), vurderer jeg imidlertid, at ingen af disse faktorer spiller en væsentlig rolle.

Jeg kunne også bevidst søge efter historier, som udmærker sig på et eller flere områder, eller jeg kunne rette min søgning mod en specifik journalistisk genre. Det er denne sidste søgestrategi, jeg vælger, efter, som beskrevet, at have dannet mig et indledende overblik over, hvad der er publiceret i en række store danske onlinemedier. Det viser sig, at den type medietekst, jeg eftersøger, faktisk udgør en ret lille population inden for online journalistik; jeg finder kun 10 historier, som indeholder både omfattende tekst og video inden for samme fortælling. Til sammenligning viser en søgning i Infomedia den 30. december 2012 på ordet "og"⁴ i webbaserede medier, at der blev publiceret 2490 artikler, som indeholder ordet "og" den dag. Studier har vist, at multimediehistorier med både tekst og video er en for-

4 Ordet 'og' er valgt, fordi det med stor sandsynlighed indgår i alle artikler.

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holdsvis ressourcekrævende journalistisk fortælleform (Bock, 2012; Thurman & Lupton, 2008), og de resultater, som generelt fremtræder i mine søgeresultater, tilhører undergenrerne 'baggrundshistorier', feature eller 'webdokumentar'. Jeg vurderer nu informationsindholdet i de indsamlede tekster. Et par nyhedshistorier er forholdsvis korte og består af en skriftlig tekst, (grafik, foto) og kun én video. Her vurderer jeg, at materialet er for "tyndt" (Pink, 2011, p. 269); dvs. at der er for lidt materiale til en analyse, der kan give svar på mit forskningsspørgsmål. Medier som fx jyllands-posten.dk og b.dk (*Bertlingske*) publicerer i hovedsagen rene videohistorier med en kort introducerende tekst under overskriftsmenuen "TV". Nyhedshistoriene på dr.dk består hovedsageligt af forskellige skrevne tekster suppleret med en eller få korte videoer, grafik og/eller stillbilleder. Disse nyhedshistorier er heller ikke egnede, fordi jeg søger en case, som består af flere eksempler på den tekst/video-relation, jeg vil undersøge.

Casen: "Sidste udkald"

Til sidst lander mit valg på historien "Sidste udkald". Casen eksemplificerer en online multimediehistorie, hvor tekst og video udgør en væsentlig del af indholdet, og den er på den måde velegnet til besvarelse af mit forskningsspørgsmål. Historien er publiceret online over flere dage fra den 30. december 2012 på politiken.dk, men alle delhistorierne er senere samlet til et komplet narrativ på et website (jf. <http://sidsteudkald.politiken.dk/>). Kort præsenteret sætter "Sidste udkald" fokus på situationen i Munkebo i Kerteminde Kommune, hvor lukningen af Lindøværftet har ført til, at en række mennesker bliver hårdt ramt af dagpengereformen, som trådte i kraft på samme tid, som historien blev publiceret. Historien annonceres indledningsvis med en rubrik, der sætter rammen og temact for de ni kapitler, som historien er delt ind i. Syv af de ni kapitler indeholder tekst, video og slideshow, og to af kapitlerne indeholder tekst og foto. Historien kommer rundt om mange aspekter af den situation, kommunen og dens indbyggere står over for. Hvert kapitel belyser en problemstilling gennem forskellige journalistiske genrer.

Begrundelsen for valg af netop denne case er altså, at den indeholder de specifikke egenskaber, jeg søger. Den valgte historie er i forhold til min analyseoptik en "tyk" tekst (Pink, 2011), idet den er omfangsrig og består af en række tekster og videoer samt slideshow og stillfoto. Det tager ca. to

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timer at læse alle teksterne og se videoerne. Første kapitel af "Sidste ud-kald", "Byen og værfct", består for eksempel af to skriftlige artikler, der belyser Munkebos historie og udvikling gennem fakta og beskrivelser fra mennesker, der kender den, en videohistorie med en pensioneret svejser, der fortæller om Munkebos historie, et videoportræt af byens sidste frisør, som også lukker forretningen, et videointerview med en arbejdsledig og to slideshows med billeder fra byen og de mennesker, der optræder i delhistorierne. Personkilderne 'genbruges' i tekst, video og slideshow. I teksterne benyttes hyperlinks til artikler og videohistorier inden for og uden for historien, der belyser problemstillingen yderligere, for eksempel et internt link til et foto eller et eksternt link til et videointerview med finansminister Bjarne Corydon. De andre kapitler består af lignende kombinationer af delhistorier. Læseren kan vælge at læse skriftlige tekster og se videoer og slideshow i den rækkefølge, de forskellige dele og kapitler bliver præsenteret i den samlede tekst. Men hun kan også vælge at gå på opdagelse i teksten i en tilfældig rækkefølge eller springe dele af teksten over og på den måde være medskaber af den informationsrækkefølge, der præsenteres i teksten. På den måde er den overordnede struktur i historien bygget op som en kombination af hypernet-struktur og sekvens-struktur (Thorlacius, 2009, pp. 170-172).

Styrken ved, at jeg har valgt denne tekst, kan siges at være, at jeg nu kan arbejde med et materiale, som består af flere forskellige tekst/video-relationer i den samme medietekst. I casen er der mange eksempler (cases) på det aspekt, som jeg især interesserer mig for. Casen er altså mangfoldig. Hvis jeg havde valgt en kort tekst, som bestod af kun en enkelt tekst og en enkelt video, ville materialet som nævnt kunne karakteriseres som 'tyndt', og jeg ville have begrænsede forudsætninger for at svare på mit forsknings-spørgsmål. Men en sådan 'tynd' case er ikke nødvendigvis ekskluderende for et casestudie; dens relevans afhænger helt af det forskningsspørgsmål og det aspekt, man har interesse for. I min analyse vil jeg tilstræbe at kunne undersøge forskellige varianter af tekst/video-relationer inden for den samme overordnede medietekst, og dermed er en case, som indeholder flere eksempler på det fænomen, jeg vil undersøge, et nødvendigt kriterium for mit valg.

Den case, jeg har fundet, er desuden interessant, da den kan karakteriseres som en atypisk case (Flyvbjerg, 2010). Den valgte case fra politiken.dk er atypisk på flere måder. I forhold til daglig 'rugbrødsjournalistik' er den

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særdeles omfangsrig i både tekst, billeder og video, og den har været publiceret over flere dage som en føljeton. Disse kvaliteter gør den egnet til at undersøge, hvordan der skabes sammenhæng og mening mellem indhold og udtryk i de forskellige tekstelementer. Den består af flere delhistorier/kapitler, som kan analyseres hver for sig og/eller i deres helhed. Historien er desuden usædvanlig, fordi journalisterne, der producerede "Sidste udkald", blev tildelt FUJ-prisen i kategorien "web" i 2013.⁵ Der eksisterer med andre ord sekundære tekster (Fiske, 1987) knyttet til denne medieproduktion, som udpeger bestemte forhold og kvaliteter ved teksten. Disse sekundære tekster er for eksempel omtaler af fortællingen og selve prisuddelingen. Dette kontekstuelle forhold kan siges at tilføje mit valg af case en ekstra dimension. Fordi casen "Sidste udkald" i en vis forstand er fagfællebedømt, bør det indikere, at casen repræsenterer høj journalistisk standard i både indhold og form. God journalistik kendetegnes bl.a. ved grundig research, klar vinkling, varieret kildebrug, professionel etik, balanceret fremstilling og fascinerende fortælleteknik (Bull, 2010). Casen er derfor særligt interessant at analysere, fordi den er vurderet som specielt succesfuld i journalistfaglig forstand. Valget af en atypisk case giver i dette tilfælde ikke bare et omfangsrigt materiale, som åbner for at anvende et varieret metodisk analyseapparat på de anvendte narrative strukturer i historien. Casen kan i kraft af sin forventelige høje standard tilmed give mulighed for, at analysens resultater kan være retningsvisende eller i hvert fald inspirerende for fremtidig produktion af online nyhedshistorier.

Det er imidlertid svært at spå om, hvorvidt den formidling, som manifesterer sig i "Sidste udkald", vil blive et mønstereksempel inden for journalistikken i fremtiden og dermed fx danne grundlag for et paradigmeskifte i online multimediejournalistik. Eksisterende arbejdsmetoder, værktøjer og teknologier kan udvikles og enten fremme den narrative struktur, som manifesterer sig i den udvalgte case, eller modsat inspirere til helt andre fortælleformer. Gennem udvikling af nye redaktionelle arbejdsmetoder og/eller ny teknologi eller platforme kan der selvsagt opstå nye typer narrative strukturer og evt. også nye former for relationer mellem tekst og video – typer, som vi endnu ikke kan forestille os.

5 FUJ (Föreningen for Undersøgende Journalistik) tildelte prisen til Lars Halskov, John Hansen, Maja Mach, Peter Hove Olsen og Maria Rosenvang Mathiesen.

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Skitser til en analysetilgang

I forbindelse med forskning, der baserer sig på casestudier, foregår analyseobjektindsamling og selve analysen ofte på samme tid. Det gælder specielt ved feltstudier og dybdeinterview, hvor forskerens tilstedeværelse, livsverden og forskningsmæssige udgangspunkt og forskningsspørgsmål påvirker forskningsresultatet (Fredslund, 2012, p. 79). Også i forbindelse med medietekstanalyse er analysen delvist begyndt ved indsamlingen af forskningsmaterialet. Casen må som tidligere understreget kunne danne baggrund for at svare på forskningsspørgsmålet, og derfor vælges casen ud fra, at den indeholder nogle specifikke kvaliteter. For at vurdere, om disse egenskaber er til stede i teksten, har forskeren allerede påbegyndt en fortolkningsproces.

Jeg har argumenteret for, at den valgte case "Sidste udkald" udgør et 'tykt' materiale. Ved en nærlæsning af historien registrerer jeg, at materialet består af ni kapitler, hvoraf to ikke indeholder video. Disse to kapitler vælger jeg fra til analysedelen, da det fænomen, jeg vil undersøge, ikke manifesterer sig. Min interesse er jo netop forholdet mellem tekst og video, så jeg foretager en yderligere reduktion af materialet ved at udelukke stillfotohistorierne, som i hovedsagen formidles til sidst i hvert kapitel. Jeg står tilbage med et råmateriale til analysen, der består af 11 tekster og ni videoer,⁶ og jeg kan nu begynde processen med at næranalysere materialet.

En online nyhedshistorie er ikke et statisk lineært analyseobjekt. Hver læser kan i princippet skabe sit eget 'flow' i læseroplevelsen, ved at hun kan vælge, i hvilken rækkefølge hun vil tilgå teksten. Analysen kan umuligt indfange alle de kombinationer, som findes i en ikke-lineær læsning. Jeg vælger derfor at fokusere på fortællestrukturen gennem en lineær læsning af teksten. Det vil i en vesterlandsk kulturkontekst typisk indebære, at læseren starter fra oven og videre nedad, og at læseren oplever historiens forskellige tekstelementer fra venstre mod højre.

I det, der også kan betragtes som den redaktørstyrede (lineære) læsning, er websitets navigationsdesign og æstetik nogle af de dimensioner, jeg vil undersøge. Her vil jeg for eksempel benytte begreber fra en socialsemiotisk analysetilgang (Kress & van Leeuwen, 2006), der forventeligt kan beskrive

6 Et videoklip fra dokumentaren "The Lindo Story" fra 1962 er udeladt fra denne registrering, fordi den er et lille uddrag af en dokumentarfilm og ikke originalproduceret til historien.

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medietekstens organisering. Fx er den aktuelle medietekst organiseret i et mønster i kraft af, at tekst i skærbilledet er placeret i venstre spalte og video i højre spalte lige over for hinanden. Der benyttes også nummerering af kapitler og navigationsikoner i form af pile oven på stillbilleder, som indikerer, at et klik betyder, at en video vil blive afspillet. I en yderligere fordybelse i, hvordan designet interagerer med læseren, vil jeg forventeligt kunne drage nytte af Kress & van Leeuwens koncepter om "information value", "salience" og "framing" (Kress & van Leeuwen, 2006).

For at undersøge, hvordan tekst og video supplerer eller kontrasterer hinanden, koder jeg de enkelte tekstelementer i historien i forhold til medietype, journalistisk genre, vinkling, fortællefunktion og kildevalg i et til formålet udarbejdet skema. På den måde laver jeg en oversigt over, hvordan og hvad de forskellige tekstelementer og aspekter kommunikerer alene og i forhold til hinanden. Den videre analyse søger at identificere en struktur, som ville kunne siges at forklare, hvordan og hvorvidt der skabes narrativ sammenhæng. I den forbindelse kan jeg forventeligt drage nytte af at analysere medieteksten i forhold til brug af retorisk og episk fremdrift (Larsen, 2003).

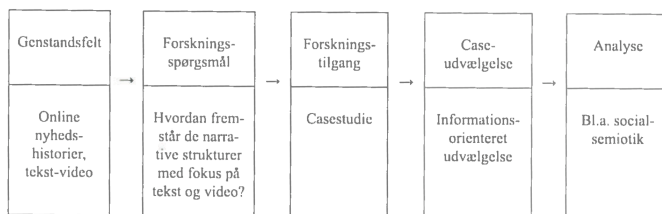
Afrunding

Det har været dette kapitels formål at diskutere de metodiske implikationer, en forsker kan stå over for, når hun vælger casestudiet som forskningsmetode, og når det drejer sig om netop online nyhedshistorier. Ved at definere og indsnævre gentandsfeltet og konkretisere det fænomen, som jeg vil undersøge gennem et casestudie, har jeg tilstræbt at vise, hvordan man ved systematisk informationsorienteret søgning kan finde og begrunde en egnet case, som kan danne baggrund for besvarelse af et specifikt forskningsspørgsmål.

Med henvisning til casen "Sidste udkald" har jeg diskuteret de forskellige overvejelser, som et casestudie kan indebære for forskningsprocessen, og hvilke implikationer der skal tages hensyn til, når casestudier synes – eller vælges – at være den bedste måde at undersøge et fænomen på. Hovedformålet med at udvælge en case har været at finde materiale til en analyse af et bestemt fænomen. Til sidst har jeg foreslået nogle mulige teoretiske tilgange til analysen af det fænomen, som casen skal eksemplificere.

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Figur 1 viser opsummerende placeringen af den præsenterede selektionsproces i forhold til den mere generelle forskningsproces. I forhold til figurens bokse har dette kapitel især fokuseret på ”forskningstilgang” og ”caseudvælgelse”, mens fx ”analyse” ikke er gennemført og præsenteret, men blot indikeret.



Figur 1. Illustration af væsentlige selektionsprocesser

Om end figuren altså præsenterer en lineær forskningsproces, kan det være nødvendigt at gentage dele af processen for at definere præcist det genstandsfelt og fænomen, som ønskes undersøgt. Inden for casestudier generelt kan forskningsspørgsmålet nemlig revurderes og modificeres i løbet af processen, fordi det indsamlede materiale måske ikke manifesterer sig, som man antog i udgangspunktet (Cousin, 2005). Det kan da blive nødvendigt at gå nogle skridt tilbage i proceduren for at sikre, at genstandsfelt, fænomen og case er kohærent i forhold til forskningsspørgsmålet.

Den tekstanalytiske tilgang, jeg har valgt i forhold til casestudiet, har sine metodiske mangler. En måde at udvide perspektivet på kunne være at undersøge narrativ kontinuitet ud over tekst/video-perspektivet, dvs. inddrage flere tekstelementer eller aspekter. Medietekster fungerer endvidere ikke i et vakuum, men er del af en diskursiv praksis (Westlund, 2012), der præger og præges af både produktionen (den journalistiske praksis) og receptionen (læseres brug) af teksten. Andre metoder kan derfor belyse andre sider af genstandsfeltet og fænomenet. Jeg kunne for eksempel foretage observationer i redaktionelle rum, hvor den faktiske produktion af online nyhedshistorier foregår, for at belyse hvorfor og hvordan de forskellige tekstelementer (fx tekst og video) bliver valgt og konstrueret. Semistrukturerede kvalitative interview med centrale aktører i produktionsprocessen kunne for sin del kaste lys over, hvordan tekstproducenterne

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selv tænker og vurderer i forhold til, hvordan multimediehistorier er intentioneret til at skulle kommunikere. Derudover kunne jeg foretage en brugerundersøgelse gennem fokusgruppeinterview, kvalitative interview, eksperimenter, cyetracking eller surveys med henblik på at undersøge, hvordan modtagere oplever og bruger den givne medietekst. Multimediehistorier består af skrevne ord, fotografier, video, animationer, (interaktiv) grafik, hyperlinks og brugerrespons. De forskellige mulige kombinationer af indhold, tekstelementer, fortælleformer og narrative forløb er nærmest uendelige. Selv en caseanalyse af en 'tyk' tekst kan måske siges blot at belyse et afgrænset aspekt af en given kompleks medietekst som den eksemplificerede, og flere omfattende studier og andre tilgange vil altså formentlig kunne berige forskningen om, hvordan og hvorvidt online nyhedshistorier er karakteriseret ved kontinuitet, og hvilken rolle forholdet mellem tekst og video spiller i den forbindelse. Med dette kapitel har jeg forsøgt at tilvejebringe indsigt i, hvordan man kan vælge sig en case, som kan danne grundlag for at besvare det spørgsmål i et tekstanalytisk perspektiv.

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ARTICLE 3: NARRATIVE FLOW IN LONGFORM MULTIMEDIA NEWS FEATURE STORIES

Narrative flow in longform multimedia news feature stories

Kate Kartveit

Abstract

This paper discusses narrative flow in multimedia off-deadline longform news feature narratives. The implementation of visual navigational design and the journalistic content factors of two journalistic multimedia case studies are analysed using visual and textual analysis. A modified version of the taxonomy of multimedia news stories (Hernandez and Rue, 2016) is presented and the findings suggest a scheme of analytical variables concerning structure, visual design and content features that can be considered when studying narrative flow or when producing multimedia news stories. However, this study also emphasises the need for further research and cross-disciplinary approaches in the study of how narrative flow is constructed and perceived in multimedia news feature stories.

Keywords

Journalism, multimedia, narrative flow, visual social semiotics, navigational design, taxonomy.

Introduction

The journalism genre is recognisable by a number of formal linguistic and aesthetic expressions, and the content relates to real actions or phenomena in society (Vobic, 2011). Since the introduction of the Internet in the 1990s, online news¹ has developed from an almost exclusively text- and photo-based communication form to one that informs the public through text, photos, sound, video, (interactive) graphics/animations and hyperlinks. In modern journalistic storytelling, many different narrative templates are implemented, depending on the journalistic genre and on national and international journalistic traditions. These narrative practices

originate in media-specific traditions in print, radio and TV. Online multimedia news stories intermix media types that have traditionally been produced using media-dependent distinctive storytelling logics and narrative structure(s). Consequently, the legacy media's traditional storytelling templates have been challenged and further developed within multimedia storytelling. The narrative flow of multimedia stories is therefore especially challenging to investigate because different forms of narratives are constantly evolving concurrently with technological developments, changing work routines and adding new publishing platforms.

This research paper is guided by the main research question: *How is the narrative flow of journalistic multimedia stories constructed?* To examine this, I will focus on the visual navigational structure and design and the content structure of two off-deadline longform multimedia feature stories. Both case studies are author-driven embedded multimedia stories and thus resemble what Dowling and Vogan (2015, 212) describe as the 'urtext' of the multimedia longform genre. To explore main research focus, I will ask the following four research questions:

The visual navigational structure is investigated through the questions:

RQ1: How is the overall visual presentation and navigational design structured to create narrative flow?

RQ2: How is the visual design and presentation regarding text and video segments executed to create narrative flow?

The content structure of the multimedia stories is investigated through the questions:

RQ3: How do the perspectives of text and video segments influence the narrative flow?

RQ4: How do the functions of the text and video elements influence the narrative flow?

To investigate these questions I analyse the narrative flow in two journalistic multimedia case studies through an analysis of structure, visual design and journalistic content factors. The perspectives of the content elements refers here to the point of view of the sub-stories and the functions of the content elements are established through the single elements' overriding functions of information, identification and fascination.

Literature review narrative flow

Online multimedia news feature production merges different media types in the same story, creating narratives using various rhetorical tactics, aesthetics and narrative paths. Models or templates for 'exemplary journalistic storytelling strategies' have been proposed in various textbooks and take different forms dependent on media type and genre (Blundell, 1988; Everton, 1999; Larsen, 2003; Rich, 2009). Journalistic feature storytelling techniques have been inspired by strategies from fiction, but the typical journalistic story can be communicated independent of 'a plot', chronology and causality (McDonald, 2014). Common among the different storytelling strategies within journalism is an attempt to transport the reader through the narrative without critical interruptions in the reader's interactivity with the story. Narrative processing is an active process that occurs when the reader interacts with the narrative and seeks to construct meaning from the communicated message (Green and Jenkins 2014). In a transportation-imagery model, Busselle and Bilandzic (2008) describe the phenomenological experience of fictional narrative engagement as follows: 'All of a person's mental systems and capacities become focused on the events occurring in the narrative' (Busselle and Bilandzic, 2008: 260). They compare this concept with Csikszentmihalyi's (in Busselle and Bilandzic, 2008: 261) concept of flow — the concept of total absorption into an activity where during that transportation and flow, 'the person's attention is completely absorbed by the activity (and individuals) stop being aware of themselves as separate from the actions they are performing'. The activity of exploring informative narratives and specific journalistic feature stories can be analogous to the activity of engaging with fictional narratives.

However, the narrative flow of journalistic stories is also based on genre-specific conventions that have been developed and communicated through nearly 150 years of practice (Van Dijk, 2009). When the audience reads or watches a journalistic piece, they recognise it as journalism due to the characteristics of how the story is communicated and presented (Douglas and Hargadon, 2000). Douglas and Hargadon discuss how the reader uses local details to recognise a work's genre, which in turn helps the reader tell how to interpret those same details. In doing so, the reader uses a schema to weigh the satisfaction provided by the work. The engagement with the text tends to come from the reader's ability to recognise a work's overarching schemas from a perspective outside the text. Following this concept, in journalism stories, the schema is characterised by a semantic and narrative flow described as a rhetoric of clarity and comprehensibility rather than one of openness, as can be present in fiction, poetry or art (Engebretsen, 2012). The ideal object of journalism is to communicate subjects and actions to the general public in a comprehensible and engaging way (Schudson, 2003). Other characteristics of journalism texts are the employment of the third person narrator (Nichols, 2001) and the call for 'objectivity', balanced coverage and ethical guidelines in production methods and publishing practice (Lund, Willig and Blach-Ørsten, 2009). The narrative flow of journalistic stories is therefore not only created through the reader's escapism in the narrative but also through the reader's engagement with the information that is communicated through the specific schema of journalistic narratives.

Multimedia texts are not only a convergence of media forms; they also involve a convergence of semiotic systems, reading conventions and rhetorical forms. The focus of this paper is on the connections, both visual and content-related, between text and video in multimedia off-deadline news feature stories and the possible implications these connections have for the narrative flow of the stories. Written text and video represent reality differently. Video communicates signs that possess significance through likeness (i.e., we see what is told), and the medium itself is also a complex multimodal form, while words have significance through

conventions (i.e., what is agreed upon). In journalism, writing refers to subjects/objects in the real world, while video seeks to show fragments of the real world (Engebretsen, 2006). When these two media types merge in the same story, a combined storytelling logic and rhetoric occurs. Engebretsen (2006, 2012, 2013) offers a theoretical framework for analysing this narrative flow of multimedia stories. He introduces the notions of *cohesion* and *tension* as dimensions for analysing the reader-text interaction in multimodal informative texts. Multimodal cohesion is based on the creation of bonds between heterogeneous elements in shaping a textual whole, a complete story wherein all sub-parts fit. Cohesion between the story elements in journalistic multimedia texts is usually necessary to create a narrative flow, but engaging texts also create tension and semantic gaps (Iser in Engebretsen, 2012) that the reader must fill in when interpreting and interacting with the text. The gaps and tension between the elements in the process of creating a textual whole must be deep and sharp enough to be challenging, but not deeper than what is possible for the reader to bridge. The text can also inhibit, intentionally or not, decidedly brake or stop factors that obstruct the reader's sense of narrative flow in the story. In this paper, Engebretsen's framework will be employed in the analysis and discussion of the narrative flow of the two case studies.

In this paper I will also distinguish between narrative flow and narrative structure. Narrative flow, as defined above, is different from narrative structure in that narrative structure refers to the navigational visual design as it is actual organised on the website. Narrative flow refers to the narrative cohesion and tension in this structure and in and between story segments, and consequently the construction of meaning in the story. I make this distinction to emphasise that the narrative flow will always be a more individual, subjective experience than the concrete 'physical' and technological structure of the narrative. Nevertheless, the narrative structure inevitably impacts the experience of the narrative flow, because the structure guides the reader's transportation through the narrative.

Methodical approach and theoretical framework

This study utilises a comparative case study approach². The two multimedia off-deadline longform case studies were selected on the basis of expectations about their information content, using information-oriented selection (Flyvbjerg, 2006). The first case study, 'Last Call' ('Sidste udkald') (<http://sidsteudkald.politiken.dk/>³), was selected from the Danish newspaper Politiken.dk's online edition. This multimedia story focuses on the community in a small town in Denmark, which was afflicted by the closing of a shipyard that employed the majority of its citizens. The story was published at the very end of 2012. The case study is a 'thick' case, consisting of nine chapters. Seven of the chapters feature written text, video and slideshows, and two chapters contain text and slideshows. It takes about two hours to read and watch the whole narrative. In addition, most chapters include internal and external hyperlinks.⁴

The second case is 'America's first climate refugees' (<http://www.theguardian.com/environment/interactive/2013/may/13/newtok-alaska-climate-change-refugees>), published in The Guardian in May 2013. The story illuminates the situation of a group of Inuit people on the west coast of Alaska who, due to climate change, are living through a slow-motion disaster that will end, very possibly within the next five years, with the entire village being washed away. This case is also a 'thick' case (about two hours to complete), consisting of three extensive parts; the three parts are each organised within two different sites or stories (six sub-parts). All sub-parts feature written text, and four sub-parts also feature video stories and photos/slideshows/graphics/hyperlinks. The two sub-parts without video contain interactive graphics and animated graphics respectively.

Both cases are produced within a off-deadline context and can be characterised as extreme cases (Flyvbjerg, 2006) because they are unusual and differ from ordinary news journalism both in magnitude and in the exhaustive journalistic covering of a topic from many angles. Both stories make comprehensive use of different oral sources and feature heterogeneous texts employed through multimedia storytelling. The two stories are also connected in content; both reveal and discuss the situation of ordinary people in small communities who face critical

circumstances in their lives and future living conditions. This, however, is where the similarity between them ends, as their approaches to exhibition and communication through visual presentation and navigational design diverge. The two cases thereby represent variation on these dimensions, meaning that they are well suited for a comparative study due to their mix of similarities and differences (Flyvbjerg, 2006).

Before the analysis was conducted, the magnitude of the content of the two stories was reduced. Within the parts/chapters, maps and still photo/shows were logged, but not thoroughly included in the textual analysis. This is due to the focus of this paper, which is the relationship between text and video elements. Both stories implement a number of external and internal hyperlinks, and the contents of these links were not included in the analysis. Reader comments were also excluded from the analysis. The material under analysis thus consisted of all three parts from ‘America's First Climate Refugees’ (AFCR) and six (of nine) chapters from ‘Last Call’ (LC)⁵.

Using three theoretical perspectives, I analyse RQ1, ‘How is the overall visual presentation and navigational design structured to create narrative flow?’, and RQ2, ‘How is the visual design and presentation regarding text and video executed to create narrative flow?’ First, Thorlacius (2009) offers a theory of categorisation of navigational structures on websites. According to her, the information on websites can be structured in one of four dominant ways: sequential structure, grating structure, hierarchical structure and hypernet structure. A visual representation of these four different structures is given in Figure 1.

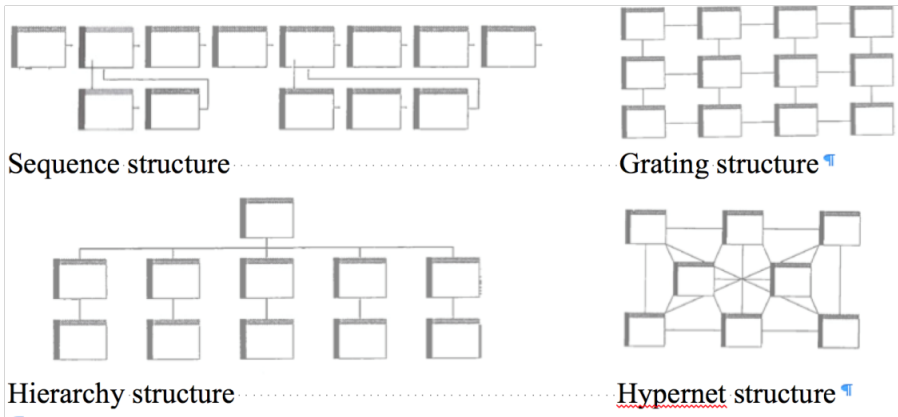


Figure 1: Visual representation of dominant web navigation structures (Thorlaciuss 2009).

The sequential structure is made up of a chronological or logical series of elements on a more or less linear path with possible bypaths. The grating structure is a system in which subjects are divided into categories and navigation is possible across main and sub-menus. The hierarchical structure organises the material and elements in ordinal 'categories' in a logical arrangement. The hypernet structure is a system that reflects associative thoughts and ideas, in which navigation can take place in associative ways across levels both on and outside the website. Thorlaciuss also lists four important considerations in website design. The visual communication should assist the function and content, relate to the target group, mirror the sender and signal the genre of the website.

Second, the taxonomy of journalistic multimedia narratives developed by Hernandez and Rue (2016) will be related to the two case studies. Their classification system is based on the narrative structure of journalistic multimedia productions. They suggest a triangle as a graphical solution for identifying commonalities and differences in story types, and visually introduce circles superimposed on the triangle to signify overlapping forms. This triangle model of multimedia story types is shown in Figure 2.

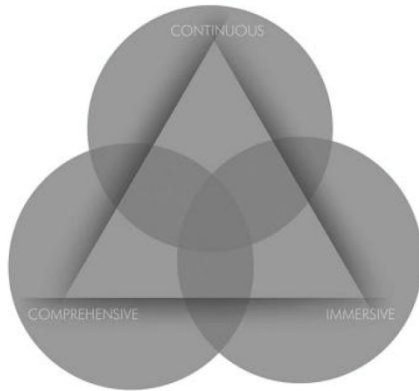


Figure 2: Triangle model of multimedia story types (Hernandez and Rue, 2016).

This model is based on the perspective of user experiences with the narratives. Each corner of the triangle represents an archetype of a story, and the superimposed circles signify how varying degrees of each of the forms can be found in different stories. Continuous stories are characterised by a linear narrative flow with a primary medium – often but not always text – driving the story, and supplementary story segments indented in the primary story flow. Comprehensive stories are broken up into sections where each story segment is unique, and in many cases told in the specific media appropriate for the content of the segment. In comprehensive stories, the users get to choose how to navigate the story by selecting the segment of most interest in a random sequence. Immersive stories create a full screen layout environment, providing a space for the user to explore; through this exploration, the narrative unfolds. This non-chronological story form often has a high level of interactivity between the space and the user.

Between these archetypes, we find immersive-continuous and immersive-comprehensive stories, etc. Hernandez and Rue developed the model by deconstructing a sample of more than 1.000 different multimedia stories, and they have unquestionably contributed to a better understanding of different multimedia

story structures and forms. Still, one obstacle to using the model is that the archetype terms are described partly with reference to technology (e.g., flash), and this approach to defining the archetypes will eventually have to change if and when the prevailing technology changes. Another difficulty with the categories is that they are not mutually exclusive. ‘Continuous’ refers to a story form that is linear and demands little user interaction, with the exception of scrolling/swiping and clicking, but a ‘continuously constructed’ story may also be comprehensive and immersive without making the story less continuous. The term ‘continuous’ describes a form, and the terms ‘comprehensive’ and ‘immersive’ both characterise a magnitude. Within journalism, ‘comprehensive’ and ‘immersive’ describe the characteristics of independent media sub-genres more than the narrative structure. Hernandez and Rue’s point of departure is the *user experience* of the story flow, which in some respects is highly relevant, but the notion of *author control and intentional reading path* can also be significant when developing a typology. Multimedia story flow can thus be characterised on a spectrum from the highly author-driven story to the highly reader-driven story (Segel and Heer, 2010). The highly author-driven story features linear ordering of information and a minimum of navigation interactivity in the suggested reading path, and the highly reader-driven story is characterised by a minimum of prescribed ordering of information and free interactivity. In-between these two extremes we find the user-directed story, where the reader can choose different prescribed paths in the narrative. Considering journalism stories and multimedia content as independent variables and the intended reading path as the dependent variable, I propose a modified triangle model of the typology of the structure of multimedia narratives. The modified model from Hernandez and Rue, wherein I include the author’s intended reading path, is presented in Figure 3.

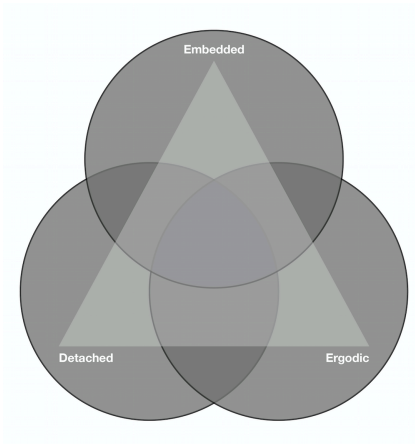


Figure 3: Modified triangle model of multimedia story types (Hernandez and Rue 2016).

Figure 3 presents ‘the embedded structured linear multimedia story’ as one in which different media types and forms are integrated and merged in the same linear author-driven narrative. ‘The detached structured multimedia story’ is a story broken up in topical segments, each of which has a narrative structure and is produced in various media types with a user-directed path. The ‘ergodic structured multimedia story’ (Aarseth, 1997) is an adventurous, highly interactive, non-chronological, reader-driven narrative, which often implements elements of gaming. This modified typology improves on that of Hernandez and Rue in that it makes the characteristics of the different story types more distinct and apparent.

This modified typology is also based on ideal types, or generalised forms that are not meant to be exhaustive; instead, they are intended to serve as the ideal forms against which individual cases and genres can be compared. We can find combinations of embedded, detached and ergodic multimedia stories, and the degree of linearity or interactivity might vary within the typology. This development of the model introduced by Hernandez and Rue has an advantage in that the terms are independent of technology; the categories of story types are mutually exclusive, and

the typology is focused on the narrative structure and not on the magnitude or journalistic genre of the narrative.

The third theoretical perspective used in this paper is the Visual Social Semiotic Theory of Representation. Kress and van Leeuwen (2006) offer this framework for reader-text interaction in the analysis of visual messages. Within this framework, technological, semiotic and social factors are regarded as systems for meaning-making; the sign is not a pre-existing conjunction of signifier and signified, but instead focuses on the process of sign-making, in which the signifier (the form) and the signified (the meaning) are relatively independent of each other until they are brought together by the sign-maker. All signs are motivated, and the 'motivation' should be formulated in relation to the sign-maker and the context in which the sign is produced. What and how you can communicate is not limited by a system of 'available meanings' coupled with 'available forms', but has a semiotic potential that is defined by the semiotic resources available to a specific individual in a specific social context. Journalistic multimedia features employ a magnitude of visual structures of representation that can thus be analysed within this framework.

RQ3, 'How do the perspectives of text and video elements influence the narrative flow?', and RQ4, 'How do the functions of the text and video elements influence the narrative flow?', are explored through the analysis of key journalistic storytelling parameters that hypothetically influence the narrative flow of multimedia stories. Professional journalism is characterised by thorough research, varied use of oral sources, balanced accounts, a high level of ethics, a clear angle and fascinating storytelling (Olsen 2006; Willig, Blach-Ørsten, Hartley and Flensburg, 2015). The main characteristics of journalistic narratives are that the content relates to actions, topics, problems, conflicts and people who exist in the real world. Journalistic stories are presented within a specific genre of factual texts, and exemplary professional journalistic stories are told from a perspective and with an explicit angle. The mix of different media types challenges the traditional reasoning, routines and practices of the composition of single-media journalistic stories (Bock, 2012, Deuze 2007). The narrative flow between story items of different media types

can be influenced by the visual design, but the content of the sub-stories can also have a possible effect on the narrative flow of the story. In this study, I have chosen two journalistic content parameters in order to investigate this: the perspective and function of the story elements.

The content of the different story elements can be characterised according to perspective and angle. The perspective, or point of view, for each sub-story or story element⁶ can be separated into 'Top-down' and 'Eye-level' stories (Holm, 2006). Top-down refers to story parts that are told in a traditional third person narrative style, with experts as dominant sources and parts that function as documentation for the piece's claim(s) or angle. Eye-level stories are story parts that are mainly told from the perspective of the consequence experts: people who personally feel and experience the consequences of the problem/conflict/action or substance of the story. The quoted and oral sources in all sub-stories can be systematised according to the type of source (Schmidt, 2014): experts (independent sources), interested parties (sources with an interest/part of conflict), consequence experts ('victims', sources that are affected) and (when visually occurring in the video story) reporters.

Further, the overriding narrative/discourse of each story element and each component's story function can be recorded. The main function of the content of the story element can be identified on the basis of Aristotle's description of persuasion/appeals: the three categories of ethos, pathos and logos (Fabricius and Roksvold, 2004: 22 – 23; Holm, 2007; Kartveit, 2006; Kartveit, 2008), which can be interpreted in journalistic terms as identification (ethos), fascination (pathos) and information (logos).

In the following sections, I will present an analysis of the visual design and navigation, and an analysis of the content structure based on these journalistic parameters. Figures 4 and 5 display screenshots of the opening page of the AFCR story and the LC story, respectively.

theguardian America's Climate Refugees Tweet 130 Share 1068

PART ONE
America's first climate refugees
› One family's great escape

PART TWO
An undeniable truth?
› The at risk list

PART THREE
"It's happening now... The village is sinking"
› The state we're in

JOIN THE DEBATE
Have your say on the Alaskan communities under threat from climate change

America's first climate refugees

Newtok, Alaska is losing ground to the sea at a dangerous rate and for its residents, exile is inevitable.



A child plays in a flooded area of Newtok village. More than 180 native communities in Alaska are experiencing flooding and loss of land as ice melts due to climate change. Photograph: Brian Adams

Sabrina Warner keeps having the same nightmare: a huge wave rearing up out of the water and crashing over her home, forcing her to swim for her life with her toddler son.

"I dream about the water coming in," she said. The landscape in winter on the Bering Sea coast seems peaceful, the tidal wave of Warner's nightmare trapped by snow and several feet of ice. But the calm is deceptive. Spring break-up will soon restore the Ninglick River to its full violent force.

In the dream, Warner climbs on to the roof of her small house. As the waters rise, she swims for higher ground: the village school which sits on 20-foot pilings.

Even that isn't high enough. By the time Warner wakes, she is clinging to the roof of the school, desperate to be saved.

Warner's vision is not far removed from a reality written by climate change. The people of [Newtok](#), on the west coast of Alaska and about 400 miles south of the Bering Strait that separates the state from Russia, are living a slow-motion disaster that will end, very possibly within the next five years, with the entire village being washed away.

What is a climate refugee?

The immediate image that comes to mind of "climate refugees" is people of small tropical islands in the Pacific or of a low-lying delta like in Bangladesh, where inhabitants have been forced out of their homes by sea-level rise.

The broader phenomenon is usually taken to be people displaced from their homes by the impact of a changing climate - although the strict definition of a refugee in international law is more narrow including people displaced by war, violence or persecution, but not environmental changes.

With climate change occurring rapidly in the far north, where temperatures are warming faster than the global average, the typical picture of the climate refugee is set to become more diverse. Sea ice is in retreat, the permafrost is melting, bringing the effects of climate change in real time to residents of the remote villages of Alaska.

These villages, whose residents are nearly all native Alaskans, are already experiencing the flooding and erosion that are the signature effects of climate change in Alaska. The residents of a number of villages - including Newtok - are now actively working to leave their homes and the lands they have occupied for centuries and move to safer locations.

Unlike those in New Orleans forced to leave their homes because of hurricane Katrina, their exile is not set in motion by a single

Figure 4: Screenshot of opening page of 'America's First Climate Refugees', theguardian.com.

POLITIKEN DK NYHEDER KULTUR SPORT DEBAT IRYEN MERE

FOKUS

Sidste udkald

Det er et sted skabt af drømme og virkelyst, men i dag kæmper Kerteminde Kommune for at overleve. Lukkede virksomheder truer med at dræbe drømmen. Kommunen er en af de hårdest ramte, når dagpengeperioden efter nytår sættes ned fra fire til to år. Især Munkebo med det lukkede Lindøværft er hårdt ramt. Politiken zoomer ind på den fynske kommune. Finder de ledige arbejde i sidste øjeblik? Bliver de reddet af regeringens akutpakke? Eller må de gå fra hus og hjem? Hvad gør de for at komme ud af klemmen? Og lykkes det at genskabe drømmen?

↓ Se video



KAPITEL 1 Byen og værftet KAPITEL 2 Jobjagt KAPITEL 3 Nyt fag KAPITEL 4 Arbejdsløse - og politikere KAPITEL 5 Ud i verden KAPITEL 6 Netværk KAPITEL 7 De få job KAPITEL 8 Slut med dagpenge KAPITEL 9 Seniorerne

KAPITEL 1: Byen og værftet

Det er ved at være sidste udkald for 43-årige Dennis Plinius fra Munkebo nær Kerteminde. Snart slipper hans dagpenge op. Så vil både han og kæresten Helle være på kontanthjælp.

Et andet sted i byen lukker 66-årige Niels Toft Jepsen sin frisørsalon efter 38 år, hvor han har klippet alle fra direktører til fejedrenge på det lokale Lindøværft.

Men værftet er lukket, og dagpengereformen kommer til at ramme Kerteminde usædvanlig hårdt. »Sådan er det jo«, lød beskeden fra Margrethe Vestager, inden den såkaldte akutpakke blev vedtaget. Borgmesteren frygter social deroute, mens Dennis kæmper for at finde et job. Håbet har han ikke mistet.

[Læs hele artiklen](#)



«Jeg troede aldrig, at værftet ville lukke. Det kom som et chok for hele Munkebo.»
Charles Tønder, pensioneret svejser



Figure 5: Screenshot of opening page of 'Last Call' (Sidste udkald), politiken.dk.

Analysis of visual presentation and visual design

The aesthetic visualisation and design of online narratives assists and facilitates how the reader navigates the narrative. It helps the reader to identify her progress and location within the whole narrative and within the sub-narratives. Different tactics can be implemented to organise the visualisation of the content. With a point of departure in the design and content of the two case studies, I have chosen to organise the registration and analysis of the navigational design and visual structure into three parts.

First, the main general structure of the story was identified according to the four navigational structures: sequential structure, grating structure, hierarchical structure and hypernet structure, as outlined by Thorlacius (2009) and the typology developed above. The predominant usage of progress bars/timeline sliders and colour palette of the story was registered. Second, the overall aesthetic and navigational design of each part/chapter was listed in terms of vertical/horizontal progress, content organisation in columns/page divisions and pop-up progress design. Third, the visual and aesthetic design relating the media types or story elements within the single part/chapter was recorded. There are conceivably different strategies that could be selected, but considering the actual design of the selected case studies, I decided to record the navigational organisation of the elements through the design's usage of highlighting, arrows, icons and annotations. Table 1 gives an overview of how the navigational structure was recorded.

	Overall structure and design	Chapters/parts structure and design	Navigational design between elements within part/chapter
Multimedia story APCR	Sequence structure	Vertical scroll Sequential structure	Small blue arrows on upper left in video thumbnail (icon) Annotation placed under video thumbnail
	Masthead part navigation bar Scroll horizontal navigation bar Navigation arrows to next chapter at bottom of page Textual icons (links to parts) Highlighting (grey) in masthead	1 column with indented elements	No specific framing
	White background and black text Blue (grey-blue) navigation markers	Stationary text Pop-up video	
	Photos/graphics and video in colour		
Multimedia story LC			
	Sequence structure	Vertical scroll Hypernet/sequential structure	B/W arrow in the middle of video thumbnail (icon) Annotations in red coloured quote signs in column
	Masthead chapter navigation bar Chapters (also) occur when scrolling down	1-3 columns	Columns/framing
	White background, black text, red navigation markers	Stationary and pop-up text Pop-up video	
	B/W photos, B/W (and colour) video		

Table 1: Record of design and navigational structures.

The overall navigational structure for both multimedia stories was characterised by a sequential structure, though the LC story has elements of hypernet structure. The sequential structure is constructed as a linear path wherein the reader is presented with sequences that are put together in a chronological and logical mode. In the typology developed above, the AFCR story is characterised as an embedded, structured multimedia story, and the LC story is characterised as a primarily embedded, structured story with elements of detached structure.

In the two stories, the overall structure of the sequences is made up of parts or chapters that are clearly separated with numbers and/or headlines that can be seen on the masthead navigation bar. Figures 5 exposes the masthead navigation bar for AFCR and Figure 6 the masthead navigation bar for LC.



Figure 6: Masthead navigation bar AFCR.



Figure 7: Masthead navigation bar LC.

Both stories progress when scrolling down the webpage. The AFCR story presents forwards (and backwards) arrows at the bottom of the page, with a grey square frame around the current location within the sequence and white frames around the arrows leading to the other parts, and hypertexts at the top and bottom of the site. The chapters of LC occur as the scrolling takes place down at the bottom of the site as well as on the masthead navigation bar.

In both stories, the reader can follow the progress of scrolling down the webpage by looking at the scrollbar on the right side of the page in order to get a

sense of how much of the text/part is left. In both stories, the background colour of the whole piece is white, which signals the absence of a specific contextualisation (Kress and van Leeuwen, 2006), and the text is written with black letters. External hyperlinks are blue in AFCR and red in LC. Both stories employ an obvious, immediate leading design that creates narrative flow and is instantaneously comprehensible to the reader, but the LC story provides the reader with more apparent options for navigation through the partly implemented hyper-structure.

Implementation of colours

While the video thumbnails in AFCR are in colour and have small, blue 'play arrows' placed within the thumbnail, the video thumbnail in LC is in black-and-white with a relatively large 'play arrow' in the middle of the thumbnail shot. Both stories employ annotations along with the video elements. In AFCR, the textual introduction is placed under the video thumbnail or within the thumbnail shot, while in LC, the intro is placed to the left or right in a column separated from the video thumbnail column. Here, the AFCR story applies a more integrated introductory text-video solution, while the intros to the LC videos create visual flow between the text and video to a lesser extent.

The aesthetic uses of colour in the masthead and navigation markers in AFCR are mainly blue with different variations, including dark blue, grey-blue and light blue. Most of the maps and graphics are dominated by the complementary colour orange/yellow, and nearly all the video thumbnails contain an element or an area with orange/yellow nuances. Two animated graphics are used, which are mainly purple, and one interactive graphic is produced with hints of red, pink and green, depending on the user's content choice. According to Kress and van Leeuwen (2006: 232), colour is not a sign, but a signifier that carries a set of associations from which sign-makers and interpreters select according to their communicative needs and interests in a given context. Associations with the colour, or aspects of the affordances of the materiality of colour, have meaning and the potential to become signifiers. The choice of colours can be highly regulated by implicit or explicit rules, or it can be relatively free, as in the process of creating art. In the social context of

journalism, the interpretation of colours is related to reality because the content covers real people and actual situations in the world, meaning that the implicit and explicit rules of colours come into play. In general, the hues of AFCR can be described as 'cold': the blue colour can connote ice, ocean and sky, themes that are central to the topic of a story about climate change. The blue colour is also used in modern emergency vehicle lights, and can be associated with 'alarm', meaning there is something at stake. The blue colour(s) that dominate the aesthetics of AFCR are also close to the signature colour of the brand 'The Guardian' and can provide the piece with an implicit affiliation with the brand. Complementary colours contrast and amplify each other, and the application of orange in many of the other visual elements creates tension by virtue of this contrast, even while also generating cohesion and harmony, since the two colours visually and physically constitute a 'pair': when they are mixed, the result is either black (subtractive) or white (additive). Except for the videos, in which the colours are saturated, the colours of the visual components are kept in hybrid pastel graduations. The visual components that are purple, red, pink and green provide contrast and fortify the dominant visual expression of the story.

LC is dominated by a black-and-white (B/W) aesthetic style, accented by a narrow, pure red line under the masthead along with red quotation markers and annotations (e.g., 'read more link'). The thumbnails of the videos are also in B/W style, but when the video runs, the piece changes to colour after about 10 seconds. The hue of LC is more neutral, with a hint of 'warmth'. In a social context, the colour red can explicitly signify love, blood, fire or danger, among other things. In the actual story, the red lines and quotation signs may work more as 'red traffic lights', meaning that the content of the stories should make the readers 'stop and think', or reflect on the consequences the people in the sub-stories are facing. However, red is also the signature colour of the news site Politiken.dk, so the colour design of the piece is in line with that of the AFCR story in that it is implicitly linked to the news brand. The B/W style and aesthetics create associations with an old-style newspaper, where the use of colour was uncommon. For some target groups, this aesthetic style

connotes that we are dealing with 'serious issues'; the aesthetics carry a sense of authority, factuality and objectivity (Bicket and Packer, 2004). It should be noted, however, that B/W style could also be associated with a boring, old-fashioned story. The sparse red signs and lines, on the other hand, create awareness in the reader that there might be another reality beyond that first impression. The change of the appearance in the videos is an example of this; each one changes from B/W style to colour after about 10 seconds.

The use of colour in the two stories is consistent, and the colour design is meticulously planned and professional in both stories. The use of colour contributes to the creation of a visual whole and supports the narrative flow. The colour palette in AFCR can be regarded as more sophisticated because of the metaphorical level implicit in the use of colours, which connects to the topic of the story. One could also argue that the multitude of colours in AFCR offers a more appealing text-reader interaction than the black-and-white colour scheme used in LC, which is more monotonous.

Depiction of thumbnails

According to Kress and van Leeuwen, images involve two kinds of participants: *represented participants* (the content) and *interactive participants* (the producers and viewers). These participants encompass three types of relations: 1) relations between the represented participants, 2) relations between interactive and represented participants and 3) relations between interactive participants. Here, the two first relations will be discussed in relation to the video thumbnails' appearance on the websites.

In the AFCR story, two of the video stories are placed at the top of the page and cover the whole width of the screen; these progressively open a portion of the story, while the four other videos are integrated in the body text. Kress and van Leeuwen (2006: 117) claim that there is a fundamental difference between pictures in which represented participants look directly at the viewer's eye and pictures in which they do not. The imaginary level of contact in pictures with a direct gaze is

created by vectors formed by the participants' eye lines. This visual configuration has two related functions. First, it creates a visual form of direct address (you), and second, it constitutes an 'image act' (the producer does something to the viewer). Pictures featuring a direct gaze are characterised as 'demand' images. In contrast, images that depict objects with a gaze directed away from the lens are designated as 'offer images'. These 'offer images' erect an imaginary barrier between the represented participants and the viewer. Figure 8 exposes video thumbnails with 'offer' image (left) and 'demand' image (right) from AFRC and LC.



Figure 8: Video thumbnails, 'offer' image from AFRC (left) and 'demand' images from LC (right).

The opening thumbnail of AFRC, a child gazing directly into the lens is, in this context, a demand image; it demands a particular social relation between the represented and the interactive participant. The image act of placing the child in the foreground on a stone surrounded by water stresses the problem that the child (representing the community) is facing, namely that the village is sinking. Figure 9 exposes the opening video thumbnail of AFRC.



Figure 9: Opening video thumbnail of AFCR.

The size of the frame's content can also suggest different relations between represented participants and viewers. The distance to the object can indicate how closely the viewer interacts with the participant(s), from intimate relationships (in a close-up of the face) to a great social distance (in a long shot). Additionally, the size of a frame can also suggest social relations between the viewer and objects, buildings and landscapes. The thumbnail with the child shows part of the village in the background, a power station and parts of buildings. Here, the power station is a significant object in the interpretation of the content of the picture. The power station (actor) (Kress and van Leeuwen, 2006: 59) is placed in the golden section of the shot, and a piece of wood in the dirt creates a narrative vector between the power station and the child in the foreground. In other words, the power station is doing something to the child, in this case creating the context of the story; when the water reaches the station, the village (child) must move. However, there is also a conceptual structure in the shot, wherein the power station symbolically represents the 'fuel' of the life in the village that is about to sink.

The horizontal and vertical angles of an image influence the reader-text interaction. The difference between the grade of a frontal horizontal angle and an oblique angle determines whether the image-maker is 'involved' with the represented participants or not. The frontal angle in this thumbnail of AFCR indicates that 'what you see here is part of our world', while an oblique angle would indicate 'this is their world'. The vertical angle of an image signposts power relations, and within TV aesthetics, a high angle is said to make the subject of the image look small, while a low angle makes the subject look imposing. Kress and van Leeuwen rephrase this claim to incorporate the viewer: if represented participants are seen from a high angle, then the relationship between the interactive participants and the represented participant gives the interactive participant power over the represented participant. Conversely, a low angle image gives the represented participant power over the interactive participant. A normal (neutral) perspective, as in the thumbnail image of the child, thus suggests an equitable relation in the reader-text interaction. In sum, the thumbnail image with the child conveys maximum involvement through the use of a frontal angle and the vertical normal perspective, which indicates an equal interactive relationship between the depicted object and the viewer. The direct gaze of the child creates involvement in the viewer, and the size of the frame (medium-long shot) indicates a medium social distance. Table 2 shows an analysis of the interactive relations of the gaze, size and angle of the six video thumbnails of AFCR.

AFCR	Content	Gaze	Size	Horizontal angle	Vertical angle
Video 1.1A	Child on stone	Demand	Medium-long shot	Frontal	Neutral
Video 1.2A	Woman smiling	Offer	Medium shot	Oblique	Low angle
Video 1.1B	Aerial shot village	-	Long shot	Neutral	High angle
Video 2.1A	Village houses	-	Long shot	Neutral	Slightly low angle
Video 2.2A	Two-shot of man and woman	Offer	Medium shot	Oblique	Neutral
Video 3.1A	4 pupils in class	Demand /Offer	Medium shot	Oblique/Frontal	Slightly high angle

Table 2: Analysis of video thumbnails in AFCR.

The LC story makes a less varied use of video thumbnails. Eight of nine thumbnails show a black/white close up of a person gazing directly into the lens. These video thumbnails are demand images, with an intimate framing size using a maximum involvement horizontal frontal angle and a neutral vertical angle. The exception to this pattern is a thumbnail that shows a long shot of a person. The video thumbnails are included in the design and layout of the websites of each story part, and must be related to the interactive participants' interaction with the total aesthetics. How are they placed on the page and which connection is visually created between the video and the body text? Within the social context of the western hemisphere, the design of printed texts, and consequently the most plausible reading path, is traditionally strictly coded from left to right and top to bottom (Kress and van Leeuwen, 2006). Websites allow multiple reading paths, but can be designed to be more or less author-driven, with either few or many user directions that lead the reader through the multimedia text.

Site layout

Within each of the story parts, the overall navigational structure in AFCR is an author-driven sequential structure. The layout of the sub-sections is designed with one column (text, video or photo/graphics) and other story features placed in indented text with different indentations (see Figure 5). The text is fully presented on the page as the reader scrolls down, and visual story elements occur as the scrolling takes place, with videos, graphics and the like occurring on the right side of the indented text when not placed at the top of the page. However, there are no direct navigation markers to the videos or graphics within the body text, so the reader can choose when or whether to watch the videos, which appear as pop-ups, by clicking the 'play button'. Upon closing down the video pop-up window, the reader returns to the sub-section page and the integrated text.

The placement of the elements in multimedia texts endows them with specific information values relative to each other. Kress and van Leeuwen (2006, 177) introduce three interrelated systems of composition of composite visuals: information value, salience and framing. Information value relates to the various

'zones' of the layout: left and right and top and bottom. On the horizontal axis, elements positioned to the left are presented as 'given' and those positioned to right are presented as 'new'; in a modern layout, the centre bridges the two and acts as a 'mediator' position. This structure is related to the ideological status of the information provided to the reader, and not the actual content of the elements. Following this concept, the body text presented on the left is given and the graphics and videos placed on the right are new in the AFCR story. Given that integrated multimedia storytelling is a relatively new journalistic form, the positioning of the elements is in tune with the Given-New axis theory, with the agreed-upon or more familiar media type to the left and the challenging, novel components to the right side. The information value of positions relative to the top and bottom take on different values because the content of the elements comes into play; what is placed at the top is presented as 'ideal' and what is placed at the bottom is put forward as 'real'. For an element to be ideal means that it is presented as the idealised or generalised essence of the information. The real is in opposition to the ideal: it presents more specific information, details and consequences. In AFCR, all sub-sections begin with a full screen video, photo, or interactive or animated graphic, and are followed by the body text that elaborates on the (audio) visual content. Here, in line with the theory, the ideal content appears with emotive appeal in the videos and photos, and the more generalised essence of the story is in the interactive or animated graphics. The body text – the real – specifies the content that has 'hooked' the reader in the ideal with more details and information. A further analysis of the structure of AFCR, with reference to the combinations of the given and new, ideal and real, shows that the sequential structure complicates the picture. There are visual elements, video and graphics that occur in the indented body text placed lower on the page. The given and new layout is clear, but the ideal and real juxtaposition is more muddled. One of these videos, for example, mainly contributes factual information (real), but the others communicate personal stories with a focus on feelings and emotions (ideal).

LC's chapters are structured in a combined sequential and hypernet structure wherein the different elements are presented on the site and the reader can choose in which order to explore the story features. The chapters of LC are presented compactly, with all the elements of the chapter, the start of the text element, video thumbnails and slideshows shown in a grid at the main chapter site. The layout of each of LC's chapters and page is organised in one, two or three clearly separated columns. Both text elements and videos components work as pop-ups, and the reader faces fewer author-driven choices than in AFCR when deciding which path to follow. Nevertheless, as in the AFCR story, the text elements are placed mainly on the left side of the page (given) and the video thumbnails on the centre or right side of the page (new). The ideal and real axis, however, is not as clear as in the AFCR-story. The top of each chapter usually presents a photo (ideal), but never starts with a video clip. All nine videos are eye-level stories (see next section below) and represent more ideal than real content. As a consequence, the design of the chapters is aligned with the theoretical frame of the ideal and real to a lesser extent, although the chapters are mostly introduced by a photo, which can be categorised as ideal.

Kreuss and van Leeuwen (2006, 177) define salience as the degree to which the elements (within a representation or between syntagms) are made to attract the reader's attention. The AFCR story presents graphics and videos in colour, and the sizes of these components are relatively large. When presented at the top, the videos and graphics occupy the whole screen (also before clicking on the play arrow), and when scrolling down, the videos take up one third or half of the screen shot. Framing is defined as the presence or absence of framing devices that connect or disconnect elements of the image. Taking the screen shot at any time when scrolling down as 'an image', the design of the AFCR story does not implement consistent framing. The elements are integrated in the body text, and the absence of clear columns and the different sizes of the non-textual elements further amplifies the incorporation of the story elements, which might create flow between the story parts.

On the other hand, in the absence of a clear author-driven guidance to consider the video stories, readers might overlook or ignore the video clips.

The LC story implements a more distinctive framing; here, the elements are clearly organised in separate columns and the video thumbnails less salient. The thumbnails are relatively small, occupying roughly one sixth of the screen shot. In this respect, the design elevates the importance of the body text elements, which mostly occupy a larger part of the screen shot. At the same time, the visual layout's strong framing is more disconnecting than connecting for the elements within each chapter.

Having outlined the main visual navigation structure and design of the two case studies, I now turn to the analysis of the content of the two stories.

Content structure and textual analysis

The textual analysis was conducted through a detailed registration and logging of the journalistic content of the two stories outlined previously in this paper. This entailed documenting the genre, the angle, the perspective and the category of oral sources of each story element. All these parameters were plotted into a scheme I developed for the purpose, which is shown in part in Table 3. In addition, the videos were analysed according to aesthetic and narrative visual style and classified and categorised as 'edited continuity story', 'montage story' and reportage respectively.

Story element in order and type of media form Scale/size	Genre/form Perspective: Top-down/eye-level	Proposition/claim/angle	Overriding narrative Content function: Identification Fascination Information	Oral sources Experts: E Interested Parties: P Consequence Experts: CE Reporter (R)	Navigational transition between elements
Part 1 A 3.1.1. <u>AMERICA'S FIRST CLIMATE REFUGEES</u>					
Text + Video 1.1A: 19 words + 53 sec	Intro/opening Attack syncs, montage, eye-level	Due to climate change, exile is inevitable	Erosion is destroying the society Fascination	Anonymous (many voices)	Arrow – Full screen/return to page
Text 1.1A: 2.622 words	Body text Background and historical overview Top-down	People are preparing to move due to climate change	Central (state) – local conflict Victims struggle for life Information	Sabrina Warner (CE) Larry Hartig (E) Nathan Tom (CE)	Video 1.2A right side of indented text
Text 1.2A: 252 words	Factual frame: Top-down	What is a climate refugee	Information		Right side of indented text
Video 1.2A Text + video 13 words + 5 min 20 sec	Reportage, continuity-action Eye-level	Water is coming close, looking forward to move	Traditional life (fishing) is possible a few yards from the house Identification	Sabrina Warner (CE) Nathan Tom (CE) Suzanne Goldenberg (R) Voice-over /LOC/Q	Arrow, click/ Pop up/close

Table 3: Section of registration scheme for content of 'Americas First Climate Change Refugees'.

Table 3 exposes a section of the scheme developed for analysis of journalistic content factors in the two case studies. Complete schemes of the content of AMFR and LC are presented in Appendix A and Appendix B.

According to genre and overriding narrative form, neither of the two journalistic productions is constructed within the paradigm of the inverted pyramid. This news form, maybe the most-used narrative form in print news production history, is characterised by presenting, in relation to the media's news values, the

most important information first and then providing information with declining prominence. This traditional form has survived specifically in the printed press due to space limitations, because the editor could efficiently shorten the story from the end forward (Barnhust and Nerone, 2009). The more or less unlimited space of online news media has changed this constraint on storytelling strategy and allowed journalists to implement various types of narrative tactics, especially in more exhaustive story types such as features. News feature stories, as a genre, independent of media type, are characterised as human interest stories that focus on actual events, issues, problems or conflicts and the people they affect, and go into great detail regarding the concepts discussed. Feature stories tend to take a narrative approach to storytelling, with narrative hooks, set-ups and pay-offs, the creation of suspense and progress, elements of scene-setting, reportage and reports of personal engagement (Steensen, 2009).

Multimedia feature stories capture these characteristics, but employ them in a mix of written text and audio, video pieces and static and/or interactive graphics and animations. Multimedia feature stories, like the two examined in this study, can thus be characterised as narrative, expository and explanatory presentations (Togebly, 2014: 100) that employ narrative tools inspired by fictional literature and documentary audio/filmmaking when structuring the journalistic material. With that in mind, we can consider how the stories are assembled. When it comes to perspective (point of view), the two stories consist of multiple sub-stories, but both are dominated by eye-level stories. An overview of the allocation of the different perspectives in the two stories is shown in Table 4.

Story	Total sub-stories	Top-down	Eye-level
AFCR body text	6	4	2
AFCR video	6	1	5
LC body text	8	6	2
LC video	9	0	9

Table 4: Grouping of journalistic perspectives in AFCR and LC.

The registration reveals that 58% of the sub-stories in AFCR and 68% of the sub-stories in LC are eye-level stories. This means that the majority of the sub-stories in both multimedia stories present the perspective of those people affected by the problems and issues that are discussed in the features. The proportion of text to video is especially interesting. In AFCR, all videos but one have an eye-level perspective (83%), while all the videos (100%) in LC are produced with an eye-level perspective.

The information, fascination and identification modes of the sub-stories represent the main functions of the content of the story elements in the progress of the chapter or story. The point of departure in this analysis is that feature news stories that work well according to journalistic standards implement all three modes in order to be both informative and engaging. In contrast, stories that work less well present one-dimensional perspectives and/or a rhetoric that does not challenge the reader-text interaction. In short, stories that stimulate different cognitive and emotional attributes during the reader experience can be characterised as more entertaining and engaging than stories that are presented from a more simplistic perspective (Douglas and Hargadon, 2000: 158). The balance of perspectives that makes up a smoothly running story will always be up for discussion, and will depend on journalistic genres or sub-schemas, access to sources and information and various working conditions, such as editorial decisions or critical deadlines. Off-deadline feature stories will, in general, by definition (Steensen, 2009) employ more content characterised by the functions of fascination and identification than a conventional informative news story. Fascination in the body text is created by epic descriptions of environments, actions and people involved. In video stories, fascination is created by showing environments, people in action and visual proof. Identification (Larsen, 2003) is established through the statements of consequence experts who communicate experiences and feelings that appeal to the readers' engagement, in both text and video elements. The analysis of the content functions characteristic of AFCR and LC is presented in Table 5.

Story	Total sub-stories	Information	Fascination	Identification
AFCR body text	6	5	1	
AFCR video	6	1	3	2
LC body text	8	5	1	2
LC video	9		3	6

Table 5: Division of content function in AFCR and LC.

This analysis in Table 5 shows that the main function of five of the six body text elements in AFCR is to provide information. One sub-story contains considerable epic descriptions as well as information, and its function is defined as producing fascination in the reader-text interaction. In the AFCR videos, one story's function is mainly informative, while three stories emphasise fascination and two provide identification. LC presents a more balanced combination of functions in the body text elements and videos; in five of eight sub-stories, the body text emphasises information. One text story also contains significant epic elements, and two sub-stories feature identification. Among the videos, the function of communicating information is largely absent; three clips feature fascination and six are characterised by identification.

A closer look at other content factors in the sub-stories reveals other aspects of the assortment of the content. The use of quoted sources in the texts and interviews in the videos strongly shapes the angle and point of view of the sub-stories. Widespread use of experts and interested parties indicates a top-down story, and an extensive usage of consequence experts signifies that the point of view of the story is eye-level. The analysis shows that the quoted sources and oral sources in the different sub-stories within the same part/chapter in AFCR and LC are highly overlapping (see Appendix C). In all parts in AFCR, a number of the quoted sources in text and video overlap. In LC, all sources in the videos also occur in the body text, except for in one video in Chapter 9. The types of sources that occur in both the body text and video within the same part/chapter are, with few exceptions, consequence experts.

Having outlined the analytical dimensions of this study, I will now turn to a discussion of how these findings potentially affect the narrative flow in the two multimedia stories⁷.

Discussion of narrative flow

Given that the two journalistic multimedia stories in this study both implement a mainly linear embedded/integrated story structure with an author-driven reading path, the basic assumption of the analysis is that the producer's intention is that the reader should be guided through the different story elements in a specific order with the help of the visual design. I refer here to the most 'plausible' reading path, because the path is not strictly coded and different cultural groupings may choose different paths. Second, I assume that the content of each of the various elements has a function in the story and that these functions create a varied reader experience that helps keep the reader informed and fascinated through the reading of the story, while the creation of identification amplifies the reader's interest in the story. Third, the use of different perspectives, angles and a variety of sources and talents in the sub-story elements generates a multifaceted cognitive reader experience and enhances the reader's interaction with the story content.

In line with the previous analysis, I will discuss the narrative flow of the two multimedia stories from two perspectives. First, I will focus on the visual and navigational design, and second, I will consider the perspective and functions of the content elements. When studying multimedia texts, it can be a challenge to separate expression from content and vice versa, but in an attempt to simplify this distinction, the navigational perspective is taken to mainly involve exploring 'how' the story is constructed, and the content perspective is taken to be related to the substance of the story, or the 'what', i.e., the factors that create cohesion or tension between the story units in the substance/content of the story.

In line with Engebretsen⁸ (2012), I have chosen to observe the narrative flow along two dimensions on a fluid scale from cohesion to tension. Extreme cohesion means here that the narrative flow slides in an unobstructed and

uncomplicated way through the story, and extreme tension means that the narrative flow is blocked or obstructed in one way or another. Between these extremes, we find story flow or story progress that can potentially work well, but on this spectrum, we also find 'gaps' that can create reader-interactivity on different levels that engage the reader.

According to Kress and Van Leeuwen (2006) and Engebretsen (2012), cohesion in multimodal texts can be achieved through composition, information linking, dialogue, rhythm, similarity, proximity and continuity. Tension, defined as the inversion of cohesion, is characterised by contrast, distance and discontinuity (Engebretsen, 2006). Here, I will mainly focus on the dimensions of *similarity/contrast*, *proximity/distance* and *continuity/discontinuity* in the process of discussing the degree of cohesion and tension in the two case studies. Other dimensions may be more relevant to stories that implement diverse visual aesthetics, navigational designs or content structure and content substance.

Discussion of visual design and narrative flow

I will now continue with a discussion of RQ1, 'How is the overall visual presentation and navigational design structured to create narrative flow?', and RQ2 'How is the visual design and presentation of text and video executed to create narrative flow?'

The navigational structures of both stories employ a logical sequential structure as the main navigational design of the whole story. The composition of an author-driven path between story parts is clearly guided in AFCR, both through the masthead headlines and through arrows and highlighting. In LC, the path is shown via masthead headlines, and the following chapter also becomes visible when one scrolls down the page. Both navigational designs employed visually guide the reader without confusing the reader with regard to the producers' preferred or suggested reading path. The visual composition is defined and repeated through the story parts. This similarity in composition creates continuity and predictability. Once the reader

has decoded the visual design, the reading path is fairly clearly defined. This can prevent confusion and disturbance in the readers' interaction with the narratives.

Within the parts and chapters, the author-driven reading path is more open in both stories. The solution of the text-video placement in AFCR, with video elements indented in the body text that appear while scrolling down, is more author-driven and creates more continuity than the solution in LC, where the video stories are separated from the body text in a different column. The design of LC signals a more independent status for the videos versus the text elements. While in AFCR the visual design signals proximity between the story elements, the design in LC indicates contrast and distance. In both stories, the reader must click on the play button in the video thumbnail in order to start the video –the videos do not start automatically as a result of scrolling down. In LC, such a design would make no sense because the elements are organised as 'standalone items', but in the AFCR story, this design would make sense if the videos were placed between body text elements, and would provide the story with an even stronger author-driven design narrative flow and continuity. Starting the videos automatically could annoy or confuse the reader, however, if implemented in the actual design, because the reader could be in the middle of a text passage when the video starts to roll, leaving it competing for the reader's attention. In the actual design of AFCR, the placement of the video elements in the indented text could create some tension, but this gap is easily bridged, because the video is not linked to a specific passage in the body text. In both stories, the reader has a choice about when or whether to play the videos.

However, the western hemisphere's most plausible reading path, from left to right, indicates that the text occurs prior to the video and should be interpreted first. In both stories, the video segments are introduced by written text. In AFCR, the title of the video story, its byline and the written introduction are placed under the video thumbnail. The textual introduction is short (10-15 words), and presupposes that the reader has read (parts of) the body text in order to grasp its full meaning. This design indicates that the video stories are 'standalone' stories that can be watched for themselves, but their placement within the body text signals that they

are part of a whole, so the composition supports the creation of proximity and continuity. The text introducing each video could create a soft transition between the two media types. It creates a continuity axis: text—text to video (intro)—video, where the introductory text is a mediator between the modalities. In AFCR, all videos start with a 5-second-long logo showing the story title and the brand of ‘The Guardian’. In my opinion, this solution is very close to a tension factor, because it creates distance and distracts the reader from his or her ongoing interaction with the story content. There is also a logo at the end of the video story, but here, it does not create the same sense of interruption, because the video clip is ending and the reader is ready to move on.

The textual introduction to the LC videos (placed in a different column or over/under the video thumbnail, see Figure 6) is an acute phrase or a quote from the talent taking part in the video clip. The videos of LC all start with a 10-second black-and-white demand shot of a motionless person, while we hear a voice talking on the soundtrack, after which the video changes into colour and shows the actual person talking or doing something. This is somewhat confusing for the reader while watching a video for the first time, but the style is consistent, so this gap is bridged after the first screening of a video story. In summary, both stories create tension at the start of the video sequence. In AFCR, this takes the form of a self-promoting logo for ‘The Guardian’ brand, and in LC, it is an experimental aesthetic form. The tension does not create discontinuity as such, but it could obstruct the reader’s interaction process.

The content of the thumbnails of the video stories could impact the reader’s motivation for clicking on the thumbnail’s arrow and watching the story. The depiction in the thumbnails could create cohesion or tension in the text-video relationship and influence the narrative flow of the story. The relationship between the represented participant(s) and interactive participants is impacted by the direction of the represented participants’ gaze, the framing of the thumbnail (social distance) and the vertical and horizontal angle. The AFCR story implements a varied population of thumbnails within all dimensions at stake. Seeing the story as a visual

whole, the thumbnails contribute to a visual variety that might create interest. In the interaction with the reader, the depictions appeal to an imaginary direct address from the represented participant(s) to the reader through demand images, the different framing allows the reader to engage with both close and reserved levels of social distance, and the different vertical and horizontal angles signify a variety of power relations and 'involvement' levels between the represented and the interactive participants. I will argue that this diversity in the potential interaction between the depicted objects and the reader inspires the text-reader relationship. The range of possible text-reader stimuli in the interaction process provides the story with appeal and temptation, and might inspire the reader to click on the play button and interact with video stories. In contrast, the two long shots in video thumbnails showing the village have less direct potential text-reader involvement and function more as documentation, or visual proof of the erosion threatening the village. In sum, these thumbnails create cohesion through proximity and do not disrupt the narrative flow.

The LC story's video thumbnails are more homogeneous demand shots with an intimate framing size, horizontal frontal angle and neutral vertical angle. However, because of the different layout with thumbnails placed in clearly separate columns (unlike in AFCR), the narrative flow between the text-video elements is less cohesive. The content of the thumbnails mostly creates direct address between the represented participants and the interactive participants; the image act is potentially 'doing something' to the reader. The very close distance of framing here establishes cohesion through proximity in the text-reader relationship. The depiction coaxes the reader to click on the play button, so to speak. However, the thumbnail shots are somewhat marred by the play arrow placed directly in the middle of the face of the depicted person. The arrow signals that there is a video behind the icon, but the power of the shots would have been stronger if the arrow's placement were less disruptive.

Use of colour, as described earlier in this paper, differs markedly between the two stories. While the AFCR story features a colourful design and makes elegant use of a complementary colour palette, the LC story's colour layout is grey and less

appealing. However, the style is clearly a deliberate choice, and the lack of colour represents a different approach to how online stories are presented in general. This design might appeal to the target audience of politiken.dk. In sum, both stories are produced with a consistent, recognisable and thought-out design in the choice of colours, one that creates cohesion between the elements and parts of the stories.

The relative salience of the video thumbnails compared with the text elements indicates to what degree each of the story elements attracts the reader's attention. The framing physically separates these elements from each other through clear columns, lines or boxes. The different patterns of salience and framing used in AFCR produce more integration, and hence more continuity and proximity, between the story's elements than do those in LC. Additionally, the integrated design of AFCR creates a more fluid narrative flow within the chapters than the design of LC. On the other hand, the more compact design of LC, in which many story elements cover the screen, is more instructive about what story elements are available; this story's navigation is less author-driven, and might engage the reader to take an active part in the creation of the narrative flow. Here, one could say that implementing the tension of providing the reader with multiple options potentially creates reader engagement and reader interaction.

After having discussed the visual navigational design of the two case studies, I will continue with a discussion of the content structure in relation to the narrative flow.

Discussion of content structure and narrative flow

I will now continue with a discussion of RQ3, 'How do the perspectives of text and video elements influence the narrative flow?', and RQ4, 'How do the functions of the text and video elements influence the narrative flow?' The specific social and cultural context of the text-reader interaction in journalistic texts is discussed at the beginning of this paper. To rephrase this context, my point of departure is that 'well-told journalistic feature stories', according to journalistic standards, create a varied reader experience and keep the reader informed and fascinated through the story by

employing different perspectives and angles and a variety of sources (Schmidt 2014). In addition, in proficient multimedia stories, the story elements perform different functions that generate a multifaceted, cognitive reader experience and enhance the reader's interaction with the story content. In the process of constructing multimedia stories, the producer of a story must consider what content is suited for presentation in what media form. Content is here understood as the whole package of perspectives, functions and the use of sources, among others.

In these two case studies, the journalistic perspective of the sub-stories is found to be dominated by eye-level stories (10 top-down and 18 eye-level). Looking at the video elements alone, the absolute majority of the sub-stories present an eye-level perspective. This exemplifies the proximity to reality that video is capable of creating. Video can communicate actions in situ, providing real sound from the surroundings and voice pitch, facial expressions and 'eye-contact', which are important elements in human communication and hence have the potential to foster emotions, sympathy (or antipathy) and identification (Engebretsen, 2006). The video story's function of creating proximity is further supported by the analysis of the functions of the story units. The main function of 8 of 15 videos is to create identification, which can be understood as a form of proximity. Video is, to a great extent, a medium for conveying aesthetic information, while journalistic writing is more a medium for conveying semantic information. My analysis shows that the main function of conveying information is present in 10 of 14 body text elements in the two case studies. Here, we can see a general picture in which the main function of the body text elements is to provide information, and the main function of the video elements is to create identification (and fascination). This leads to the key question: how do these different perspectives and functions influence the narrative flow of the stories? Kress and van Leeuwen (2006) point out that it is in the 'mix' of different 'voices' that a jointly tuned interaction is created in front of a computer screen. In other words, a balance of different perspectives ('voices') on a subject can create cohesion between the story elements and continuity in the reader interaction. I have argued in this paper that the different functions of these stories' units

potentially create variation and a multifaceted cognitive reader experience with the text that enhances the reader's fascination and interaction with the story. As shown in the previous analysis of the story elements, both AFCR and LC employ different perspectives in the sub-stories and apply different functions to the story units. This variation in perspectives and functions may generate different cognitive reactions in the reader and appeal to different emotional levels. When reading through the stories following the author-driven path, the interactive process in the reader fluctuates between adopting a written rhetoric of factual information and argumentation and a visual rhetoric of feelings, personal experiences and fascination. This 'mix' creates proximity and dialogue between the story units when the sub-stories build towards sub-thematic, geographical, time/space and personal (sources) convergence. Both AFCR and LC accomplish this narrative structure through the content of the sub-units. AFCR features a wider variety of perspectives and functions in both body text elements and video stories than LC, in which all videos are presented in an eye-level perspective.

The use of oral sources can further exemplify the narrative creation of continuity and cohesion between the story elements. In all the video stories in AFCR, a consequence expert present in the body text also appears in the video. In LC, 7 of 9 videos elaborate on the story of a consequence expert that occurs in the body text. This 're-use' of talent can, however, create tension as well as cohesion. If the body text and video communicate more or less the same perspective and perform the same function with the same sources, the reader experience could easily become uninteresting, creating the impression of a repetitive duplication of information. It may therefore be crucial for the producers of multimedia stories to deliberately prioritise what information to present in what form. Tension between story elements can challenge the reader, but it can also be bridged in the interactive reading process. Tension factors such as distance (in topics, angles, etc.) and discontinuity, on the other hand, can generate gaps too deep to be bridged in the interactive reader process.

The modality values of 'given' vs. 'new' and 'ideal' vs. 'real' (Kress and van Leeuwen 2006, 177) relate to the interrelated systems of composition in composite visuals, or the horizontal and vertical axes of visual presentation. The traditional reading path, moving from left to right and top to bottom, plays a significant role in analysing these patterns. From my perspective, the placement of elements as given or new impacts the narrative flow to a lesser extent in embedded multimedia stories. The ideological status of text as given might still be in place, but in principle, the video (new) can be placed on the left side of the body text (given) without interfering with the narrative flow. In traditional reader interactions, this would simply signal that the video should be viewed before reading the text, according to the suggested author-driven path. This design is not often seen in online media, however; most often, the video is placed before or between body text elements if the predefined path is watching the video before reading the body text. For the information values corresponding to the top and bottom of the page—the ideal and real—the content of the elements comes into play. In the LC story, the visual design is compact and the story elements appear as multiple choices on the screen. Here, the relation between the ideal and real is not as distinct as in the AFCR story.

The analysis shows that in the AFCR story, each part starts with content defined as ideal followed by content described as real. Beginning a story with content that is a generalised essence or a fascinating portion of the substance of the story is a well-known storytelling template in journalism, where the function of the opening section is to hook the reader and establish interest in the story. Through the ideal content, a narrative flow is created leading into the real content. In exhaustive feature stories like the two case studies evaluated here, the body text is spatially divided into smaller sections juxtaposed with photos, graphics and video. This creates a reciprocal interaction between the ideal and the real, in which the different functions of the story elements create a varied reader experience and can potentially enhance the reader's interaction with the story content.

Conclusion

In this paper, I have analysed and discussed how narrative flow is displayed in online off-deadline linear author-driven embedded multimedia news feature stories through two longform case studies. The main focus has been on the overall narrative flow between story parts/chapters and on the flow between body text and video elements within parts/chapters. In doing so, I have employed theory of visual design, visual social semiotics and journalistic theory.

In relation to RQ1: ‘How is the overall visual presentation and navigational design structured to create narrative flow?’ I found that important factors to create narrative flow are a logical overall structure and intuitive navigational design, and a layout that mirrors the author-directed intended reading path. I found that the overall navigational structure for both multimedia stories is characterised by a sequential structure, though the LC story has elements of hypernet structure (Thorlacius 2009). The sequential structure is constructed as a linear path wherein the reader is presented with sequences that are put together in a chronological and logical mode, and the hypernet structure allows navigation in associative ways across levels both on and outside the website.

I have also modified the taxonomy and triangle model of Hernandez and Rue (2016) and categorised ‘the embedded structured linear multimedia story’ as one in which different media types and forms are integrated and merged in the same linear author-driven narrative. ‘The detached structured multimedia story’ is a story broken up into topical segments, each of which has a narrative structure and is produced in various media types with a user-directed path. The ‘ergodic structured multimedia story’ is an adventurous, highly interactive, non-chronological reader-driven narrative, which often implements elements of gaming.

In the typology above, the two case studies are respectively characterised as an ‘embedded, structured multimedia story’ (AFCR) and as a primarily ‘embedded, structured story with elements of detached structure’ (LC). In the modified triangle model in Figure 10 the two case studies are placed within the model.

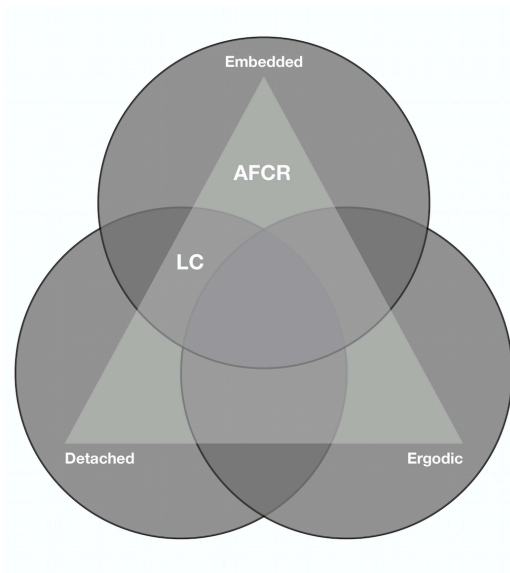


Figure 10: AFCR and LC placed in the modified triangle model of multimedia story types (Hernandez and Rue 2016).

The two case studies have different structural solutions and design, but the analysis demonstrates that the visual design and structure is consistent and distinct in each story. The navigational design between parts/chapters is organised through masthead markers on the top and bottom of the webpages and through navigational markers when scrolling down the page. Through close reading and analysis, the navigation between parts and chapters is found to be intuitive and logical without major tension factors. The stories create a balance between cohesion and tension in the interplay between story units and provide the reader with a platform for creating a narrative whole, but they also challenge the reader to construct the semantic bridges in the text.

The process of close reading and textual analysis requires critical creativity and an exercise of logical reasoning in order to lead to analytical discoveries. The goal is to obtain approximate objective knowledge about the phenomena studied.

My purpose in the research was to investigate the narrative flow, presuming that flow existed in both the case studies. Both case studies originate from news organisations with ‘quality brands’ (Vekhoo, 2010), and this anticipation might have led me to look for cohesion more than tension in the narrative flow. Contrary to this, the activity of close reading and analysis over months is an agreed upon research method (Brinkmann and Tanggaard, 2010) of submitting textual analysis. In doing this, my analysis and discussion has demonstrated what vital structural, design and layout factors to consider when producing, evaluating and analysing the overall narrative flow and visual design of multimedia feature stories.

RQ2 was formulated as: ‘How is the visual design and presentation regarding text and video segments executed to create narrative flow?’ My analysis reveals that the different story elements’ placement, framing, salience, use of colour and content of video thumbnails are factors that can conceivably affect the reader’s interaction with the story. The two stories employ different visual approaches to presentation. In the AFCR story, the organisation of story elements signals cohesion through a more integrated, author-driven and linear path than in the LC story. The different framing and salience of the story elements amplifies these differences in navigational structure and possible reading paths. The LC story shows less cohesion between these elements than the AFCR story, but this tension also allows the readers to engage and create individual story paths and consequently interact with the text by filling in the gaps in order to create a textual whole. The pictures in the video thumbnails also differ between the two stories. The AFCR story depicts various motifs and potentially different ‘image acts’ and relations between the interactive and represented participants. The LC story makes consistent use of close-up demand images. It is difficult to tell from this analysis whether the differences between the two case studies in salience, framing and thumbnail content have a decisive impact on the readers’ interaction with the story, but the findings emphasise the possible influence that these factors might have on the interaction process. Through analysis of the design and layout of the single webpage (sub-section), I found that the concepts of ‘ideal and real’, ‘given and new’, salience, framing, use of colours and

content of thumbnails (Kress and van Leeuwen, 2006) are vital factors that influence the course of the narrative flow. In the two case studies analysed I found that overall, these factors are implemented in a mode that supports the linear author-driven reading path.

In relation to RQ3: ‘How do the perspectives of text and video segments influence the narrative flow?’ and RQ4: ‘How do the functions of the text and video elements influence the narrative flow?’ the analysis demonstrated that the internal mix of perspectives and functions of the narrative elements in a linear author-driven embedded multimedia news story can influence the perceived cohesion and tension in the reading experience and hence the narrative flow. This study found that factual information and abstract discussions were predominantly communicated in body text, while personal lifeworld experiences and visual documentation were presented through video stories. These different perspectives and functions may enhance the narrative flow and reader interaction with the stories, because the story elements complement each other and thus create a varied reader experience that might stimulate the interaction process. The rhythm (Kress and van Leeuwen, 2006) of the whole narrative is thus important when creating narrative flow between heterogeneous story elements. However, it should be noted that the structure and content of each story segment probably has an additional effect on narrative flow; each story element must present engaging content and an internal vehicle that drives the sub-story forward.

Furthermore, the use of oral sources and talent in the different story elements may influence the narrative flow. Repetitive use of talent and interview segments in text and video might create tension in the narrative flow because the recurring information can reduce the readers’ interest in and interaction with the story. The importance of an internal ‘appropriate mix’ of content elements that creates a multifaceted cognitive reader experience is thus vital when the objective is to keep the reader interested and interacting with the news narrative.

The four research questions stated in this paper have been investigated through visual and textual analysis. For the results of the analysis it appears that the structure, design and content variables that have been included in the two analyses are relevant and applicable for the purposes of identifying factors that create cohesion and tension in the narrative flow of linear author-driven embedded multimedia news narratives. Table 6 summarises the findings of the study.

	Cohesion factors	Tension factors
Structure	Transparent navigation Logical arrangement	Unclear navigation Inconsistent organisation
Visual design/Layout	Consistent Clear priority of elements Appropriate salience and framing Thorough implementation of colours Inviting thumbnails	Inexpedient Confusing priority of elements Arbitrary salience and framing Random implementation of colours Uninviting thumbnails
Content	Deliberate choice of content for media type Purposeful management of story elements' perspectives and functions Considered choice of talent in story elements	Random choice of content for media type Unintentional management of story elements' perspectives and functions Extensive repetitive use of talent in story elements

Table 6: Summary of cohesion and tension factors between text and video elements in linear author-driven multimedia narratives.

Table 6 discloses the central findings of this study, which are cohesion and tension factors in structure, visual design, layout and content structure and content features. These findings are the result of the methodical approaches applied in this study, but textual analysis of multimedia texts alone does not necessarily deliver the full answer to the given research questions. By the execution of an in-depth, thorough textual analysis of the two exhaustive case studies, I believe though I have

contributed to a profound understanding of how narrative flow is performed in longform linear author-driven embedded multimedia news features.

Although the case studies in this study are exhaustive feature stories that have been thoroughly analysed and discussed, the study represents only one attempt to investigate the narrative flow of multimedia narratives in online media. Additional studies are needed to increase the understanding of how narrative flow is created and opposed. More studies could feature other aspects of news storytelling and utilise other methods in the understanding of narrative flow. The two case studies that have been analysed and discussed in this paper are linear author-driven embedded feature stories. This type of online news story is a legacy of the printed press. Both stories are text-driven with indented video (and graphic) elements, organised in story parts or chapters designed to be experienced in a specific order. The fundamental story form is not extreme or advanced compared with single media stories that are constructed with a continuous reading path. The readers are invited into an author-driven reader path, but as in most texts, they can skip story segments or jump between elements. In the typology of Hernandez and Rue, which has been modified in this paper, the story types ‘detached structured multimedia story’ and ‘ergodic structured multimedia story’ occupy more unpredictable reading paths, which would challenge this methodology for analysing narrative flow.

Future studies on the narrative flow of longform multimedia news stories could thus focus on non-linear, reader-directed and reader-driven narratives. The effects of technological innovations and possible changes in journalistic practice and journalism storytelling are factors that also warrant further investigation. Other research approaches and methods for analysing multimedia stories, for example (critical) discourse analysis, could also be welcome. Experiments with audience groups exposed for different story forms and story templates are also relevant through i.e. eye-tracking experiments.

Although the phenomena studied here were investigated through a snapshot of a field undergoing permanent evolution, I believe that, within its limitations, this

study contributes to the existing knowledge about narrative flow in journalistic multimedia stories.

Notes

¹ As the responsive design of websites is rapidly being implemented in online news organisations, 'online media' here also includes mobile media (tablets, smart phones, etc.).

² See Chapter 2 in this dissertation.

³ The website has been closed. Downloaded material and copy of texts are presented in appendix D.

⁴ The story was awarded the best multimedia story by The Danish Association for Investigative Journalism in 2013.

⁵ Last Call: Chapter 1, 2, 3, 4, 5, 6, 9. America's First Climate Refugees: part 1, 2, 3.

⁶ Text elements and video stories were registered.

⁷ The analysis presented here is a result of personal reading, as are all textual analyses going deeper than mere registration and description. Nonetheless, given the analytical registration and dimension above, there are reasons to assume that other analysts would come to conclusions not entirely different from those presented here.

⁸ In Engebretsen's analysis, various dimensions are implemented, but the notions of cohesion and tension relate to the interpretation of the multimedia product.

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ARTICLE 4: THEY NEVER MADE IT TO THE END. READER USES OF A MULTIMEDIA NARRATIVE

They never made it to the end

Reader uses of a multimedia narrative

Kate Kartveit

Abstract:

How does an audience respond to the structure, visual design and narrative flow of a multimedia narrative? Are readers following the course that an author-driven linear reading path suggests? This study investigates these questions through an eye-tracking experiment. In research within news websites that employ eye-tracking experiments the case in this study represents a new phenomenon for investigation, the longform multimedia feature. It is also especially interesting to explore how the readers interact with this type of narrative because the narrative is constructed as an author-driven embedded multimedia story and thus resemble what Dowling and Vogan (2015, 212) describe as the 'urtext' of the multimedia longform genre. The findings of this study indicate that readers navigate according to the author-driven narrative flow within a chapter/part. But the readers in this study missed or misunderstood the navigational options between story parts. The ongoing digitalisation in media outlets and the experimentation and developing of journalistic products might benefit from research addressing multi-methodological approaches.

Keywords: Eye-tracking; feature journalism; multimedia; narrative flow; news journalism; visual design.

Introduction

The aim of online news producers is to help readers effortlessly explore content and avoid being interrupted by the interface and design of the website. The increasing

use of multimedia elements in online news media's storytelling (Karlsson and Clerwall 2012) raises the question of how an audience interacts with multimedia narratives. How does the audience respond to the structure, visual design and narrative flow of a multimedia narrative constructed using an author-driven linear reading path? This paper attempts to answer this question through an eye-tracking experiment on a longform multimedia feature narrative. This study reveals that the test subjects never reached the end of the story. The test subjects ignored the navigational path(s) between story parts, although they followed the linear author-directed path within a story part on a single website.

The eye-tracking experiment was conducted on the multimedia feature story 'America's First Climate Refugees (AFCR)' (<http://www.theguardian.com/environment/interactive/2013/may/13/newtok-alaska-climate-change-refugees>) published in the online addition of *the Guardian* in May 2013. The story is a linear embedded author-driven narrative¹ (Segel and Heer 2010) with a sequential narrative structure (Thorlacius 2009).

A screencap of the chosen feature story's opening page with a masthead banner, opening video 1.1A, body text and a side panel/factual box is presented in Figure 1.

theguardian
America's Climate Refugees
Tweet 130
Share 1068

PART ONE
America's first climate refugees
 › One family's great escape

PART TWO
An undeniable truth?
 › The at risk list

PART THREE
"It's happening now... The village is sinking"
 › The state we're in

JOIN THE DEBATE
 Have your say on the Alaskan communities under threat from climate change

America's first climate refugees

Newtok, Alaska is losing ground to the sea at a dangerous rate and for its residents, exile is inevitable.



A child plays in a flooded area of Newtok, Alaska. More than 1,800 native communities in Alaska are experiencing flooding and loss of land as ice melts due to climate change. Photograph: Brian Adams

Sabrina Warner keeps having the same nightmare: a huge wave rearing up out of the water and crashing over her home, forcing her to swim for her life with her toddler son.

"I dream about the water coming in," she said. The landscape in winter on the Bering Sea coast seems peaceful, the tidal wave of Warner's nightmare trapped by snow and several feet of ice. But the calm is deceptive. Spring break-up will soon restore the Ninglick River to its full violent force.

In the dream, Warner climbs on to the roof of her small house. As the waters rise, she swims for higher ground: the village school which sits on 20-foot pilings.

Even that isn't high enough. By the time Warner wakes, she is clinging to the roof of the school, desperate to be saved.

Warner's vision is not far removed from a reality written by climate change. The people of [Newtok](#), on the west coast of Alaska and about 400 miles south of the Bering Strait that separates the state from Russia, are living a slow-motion disaster that will end, very possibly within the next five years, with the entire village being washed away.

What is a climate refugee?

The immediate image that comes to mind of "climate refugees" is people of small tropical islands in the Pacific or of a low-lying delta like in Bangladesh, where inhabitants have been forced out of their homes by sea-level rise.

The broader phenomenon is usually taken to be people displaced from their homes by the impact of a changing climate - although the strict definition of a refugee in international law is more narrow including people displaced by war, violence or persecution, but not environmental changes.

With climate change occurring rapidly in the far north, where temperatures are warming faster than the global average, the typical picture of the climate refugee is set to become more diverse. Sea ice is in retreat, the permafrost is melting, bringing the effects of climate change in real time to residents of the remote villages of Alaska.

These villages, whose residents are nearly all native Alaskans, are already experiencing the flooding and erosion that are the signature effects of climate change in Alaska. The residents of a number of villages - including Newtok - are now actively working to leave their homes and the lands they have occupied for centuries and move to safer locations.

Unlike those in New Orleans forced to leave their homes because of hurricane Katrina, their exile is not set in motion by a single

Figure 1: Screenshot of opening page of 'America's First Climate Refugees', theguardian.com.

The story describes the situation faced by a group of Inuit people on the west coast of Alaska who, due to climate change, are experiencing a disaster in slow-motion that will end, quite possibly within the next five years, with the entire village being washed away. This case is dense, or a ‘thick’ case, (Pink 2011) taking about two hours to complete, and consists of three extensive parts which are divided into two different sites or stories with six sub-parts in total. All sub-parts feature written text, and four sub-parts also feature video stories and photos/slideshows/graphics/hyperlinks. The two sub-parts without video contain interactive graphics and animated graphics, respectively. The case is produced within an off-deadline context and can be labelled an extreme case (Flyvbjerg 2006) because it is unusual and differs from ordinary news journalism both in magnitude and in the exhaustive journalistic coverage of the topic from numerous angles. The story makes comprehensive use of various oral sources and features heterogeneous texts employed through embedded multimedia storytelling.

Prior to the eye-tracking experiment, I conducted a textual analysis of the case that focused on its navigational structure, visual design and journalistic content elements with the objective of studying how narrative flow has been constructed in this multimedia story. In the textual analysis, I found that the navigational structure and visual design are intuitive and transparent and that the layout mirrors the intended reading path. The aim of this paper is to investigate whether news readers’ experience with the multimedia narrative correlates with this finding. The following research question was developed for the eye-tracking experiment:

RQ1: How does a group of readers respond to the structure, visual design and narrative flow of the presented multimedia narrative (AFCR) constructed within an author-driven linear reading path?

In the exploration of this question, three hypotheses were proposed on the basis of my previous textual analysis of the AFCR story’s visual design and narrative flow. The textual analysis was executed employing Kress and van Leeuwen’s (2006) theory of social semiotic and Thorlacius’ (2009) categorisation of webstructures

and Engebretsen's (2012) concepts of cohesion and tension in narrative flow.

H1: Readers of a linear embedded multimedia story prefer to interact with the text in the chronological order suggested by the author-driven reading path, from top to bottom and left to right.

H2: Readers prefer visual elements over text(s) in embedded multimedia feature stories.

H3: Readers follow navigational icons, such as lines, arrows, links and paratext on the web site.

The focus in the experiment was specifically on the readers' behaviour concerned with the overall design and navigation of the website(s) and on the user interaction with the core multimedia story elements.

Literature review

Experimental eye-tracking studies focusing exclusively on news media are relatively few and were introduced in the late 1980s (Leckner, 2012). Holsanova et al. found that five test subjects who read a broadsheet newspaper could be categorised as 'the entry point overviews', 'the focused reader' and 'the editorial reader'. Traditional newspaper reading has been studied in Poynter's landmark eye-tracking research since 1991 and e.g. by Holmberg, Holmquist and Holsanova (2006). These studies reported that the main images and headlines attract the most visual attention during a first-time viewing of a page. On the other hand, studies have shown that readers examining the first page of an online newspaper first focus on text, such as briefs, captions and lists, rather than on photos and graphics (Leckner 2012, 169). Zambarberi et al. (2008) found that 86% of 14 test persons read the top area of an online newspaper's first page before moving to the lead story. In a comparative study of print and online newspapers, Bucher and Schumacher (2006) found that online headlines are mainly ignored, yet Outing and Ruel (2004) found that dominant headlines typically attract the reader's attention, especially when the headline is placed in the upper left corner of the website. Russel (2005) used eye tracking data to examine how users perceived the first time usage of three different

e-commerce sites that sold educational toys. Results showed that a large image at the center of a site tended to receive higher fixation rates and which was also the case for other elements around that area with comparable large scale. Chu, Paul and Ruel (2009) conducted a primary eye-tracking study with the goal to identify design, and examine various online news features in order to determine the impact of different digital design combinations on news audiences. Three different types of slide show navigation, three different cues for 'breaking news' and three different positions of supplemental links were examined. They found that from the slide show navigation the 'next' button was the most frequently used form of navigation. The breaking news that was designed in a box format captured the most attention and eye fixations and that embedded links were being read by four of 96 participants.

The Poynter Institute's 'Eye-track07' investigated the differences between reading news in print or with online media. The study also revealed patterns in online reader behaviour when presented with different online layouts and alternative story forms of what is essentially the same news story. One of the findings indicated that a larger percentage of story text was read online compared to in print. Online readers read 77% of the articles they chose to read (broadsheet print: 62%). While print readers were first attracted to large headlines and colour photos, online readers were drawn in by navigation bars and teasers or other directional devices. I will relate findings from Poynter's studies to the findings of my experiment in this paper.

The different eye-tracking studies and results outlined above demonstrate that reading behaviour is a complex phenomenon and that the methodology used to examine it has limitations. The experiments are performed under artificial conditions, and the task conditions the test subjects experience may influence the outcome of the studies (Bucher and Schumacher 2006, 350; Kurzahls et al., 4) The fact that individual differences in reading behaviour exist on both cognitive and emotional levels (Leckner 2012) is also a limitation. The homepage of a newspaper or a news website is crowded by various kinds of information, including mastheads and navigation banners; the lead story and tens of brief stories; links to internal sections; photos; videos; graphics and different forms of games, advertisements and

commercials. In contrast, the eye-tracking experiment in this study involves a ‘stand alone’ multimedia feature story published on theguardian.com. The narrative is situated under the ‘environment-interactive-section’ and is presented without commercials or other stories competing for readers’ attention. Within research using eye-tracking, this case represents a new phenomenon for investigation within news websites. It is also especially interesting to explore how the readers interact with this type of narrative because the narrative is constructed as a clear author-driven embedded multimedia story and thus resemble what Dowling and Vogan (2015, 212) describe as the ‘urtext’ of the multimedia longform genre.

In the next section, I will account for the methodological approach of the experiment, followed by an analysis and discussion of the eye-tracking data. The eye-tracking experiment was followed up with an online survey and an exit interview, and data from this material will be included in the succeeding analysis and discussion.

Methodology

Eye-tracking is a process that identifies specific points in both space and time that the participant looks at. The specific points, e.g. on a computer screen, that the test person looks at are recorded and the gaze direction indicates where people focus their attention. The eye-tracker collects data on both eye saccades and fixations. Fixations are attention markers when the participants are looking at a word or an image, and saccades are the paths between fixations. Analysis of the data was performed retrospectively based on analysis of eye saccades and fixation data. The point of departure taken is that the eye movement variables can help measure and identify the participants’ cognitive activity while exploring the website (Sundstedt 2011). The path of the reading activity and the duration of a person’s gaze at a particular element of the visual presentation can help identify the participant’s area of interest. Furthermore, the frequency of fixations and eye movement paths can be used to evaluate a user’s attention to and curiosity about a specific element or area of the visual presentation (Huber and Krist 2004). On the other hand, the duration of

fixations and re-fixations can also reflect participants' difficulties with information processing during reading or scrolling.

Six volunteers participated in the eye-tracking experiment, which took approximately 45 minutes to complete for each participant². According to the demographic profile of *the Guardian* site users, 56% are between 36-64 years and 39% are between 2-36 years, and the site users are 50% male and 50% female.³. In this study, 60% of participants were between 36-64 years and 40% between 2-34 years, and the participants were also 50% male and 50% female. Four persons employed at the School of Journalism in administrative/technical positions and two male students from a high school⁴ took part in the study. The number and selection process of participants are diverse in other eye-tracking studies. Holsanova et al. (2006) installed a drop-in laboratory at a media conference and did an analysis of five participants' eye-tracking measurements combined with a social semiotic analysis of a newspaper spread. Liu and Chuang (2010) used eight non-science major students in an eye-tracking experiment when studying the reading patterns on web-based multimedia presentations. Katsanos et al. (2010) offered students at a university department partial course credit for taking part in eye-tracking studies on websites. Sutcliffe and Namoun (2012) investigated how twenty-five postgraduate students and research staff from The University of Manchester navigated through web pages with different designs. In eye-tracking studies, we evidently find relatively small samples of participants compared to a more extensive experiment with 582 participants (Poynter.org, 2008). The selection method of participants is also varied. The sample size of this study is comparatively small, but the composition of the sample is very similar to the demographics of *the Guardian* website users. In addition, scholars testing the usability of web design (Nielsen et al. 1993) claimed that five test subjects are sufficient to identify 85% of the usability problems and that you need to conduct tests with at least fifteen users to discover all the usability problems. Instead of conducting one experiment with a large number of test subjects Nielsen et al. recommend running many small tests. This study attempts to run one such small test, but since only one test will be performed, the findings of

the experiment represent more indications than generalisable findings.

All the participants in the experiment used the Internet on a daily basis. One of the five participants had participated in an eye-tracking experiment before, but none of the participants had seen the presented story before. Two of the participants reported that they had explored fewer than ten multimedia stories before the experiment took place and three reported that they had explored more than ten stories⁵.

The eye-tracking experiment was followed up with a survey and exit interview with the participants. The survey (Appendix 4) included 15 substantial questions (deducting six questions about the participants' personal information and information about online experience, etc.). The questionnaire included multiple-choice questions, questions with the options of yes/no/do not know and questions rated on a scale (e.g., a gradation from 'a lesser extent' to 'a greater extent'). The focus of the survey was on different aspects of the story's visual design and the relationship between text and video. The first group of substantial questions was related to the America's First Climate Refugees (AFCR) story and the second group of questions was related to text-video and multimedia stories in general.

The semi-structured exit interviews were audio recorded and transcribed, and the duration of the interviews ranged from nine to fourteen minutes. During the interviews, the participants were asked to reflect on, explain and comment on the behaviour that was observed during the eye-tracking experiment. The focus of the interviewing process was on the layout of the story, the navigational options between story parts and the content elements in part one of the story.

Before the eye-tracking experiment began, the participants were presented with a story with similar navigational and design features to the AFCR story, in which the eye-tracking equipment was calibrated. The participants were then orally introduced to the story as follows:

*Imagine you are at home reading the Guardian's website.
You read the introduction to a story about the effect of climate change in
Alaska. You think that this is an interesting issue, so you click on the link.
Feel free to explore this quite exhaustive story.*

At this point, the participants were presented with the opening website (part 1A) of AFCR and encouraged to explore the story.

The participants sat in front of a 17-inch monitor wearing SMI eye-tracking spectacles (ETG), 60 Hz., and Studio Professional Edition Eye Gaze Analysis software was used to record (and analyse) the data. Opinio software was used for the online questionnaire that was conducted after the eye-tracking experiment. I did not generate heat maps due to the small scale of the experiment. Instead, data (fixations and saccades) on each participant were separately analysed in-depth and the findings of each eye-tracking analysis were supported by the participants' questionnaire responses and exit interviews. I compared the findings from the data on each participant with the findings from the data generated by the other participants. Finally, I looked for patterns in reading, scrolling and navigational behaviour and interaction with the story.

Analysis of eye-tracking data and exit interview

The premise of the analysis is that the duration of eye fixations and the number of fixations and re-fixations reveal patterns describing how a user's attention is directed to a given region or visual area of the computer screen (Sundstedt 2011). In order to understand how the readers experience the narrative flow of the multimedia story, the aim of the analysis is to identify patterns in users' behaviour and interaction with the different elements of the webpage(s).

In line with other eye-tracking studies on online media users (pointer.org., 2004-15⁶), I found that media users can be divided into methodical readers and scanners. In general, methodical readers mainly follow the suggested narrative flow, the author-driven design and reading path of the story. The methodical readers study the written text thoroughly and view or glance at most of the graphics, photos and videos that occur during the scrolling process. Scanners, in general, view headlines

without reading much text and might click on story elements like a slideshow or video, but seldom return once they have left the text or story-element. In the sample in this study, I found that three of five of the participants were methodical readers and two were scanners, although the scanners demonstrated a behaviour that positioned them more in the middle, as they also showed some methodical reader activity. In Poynter07 they found, respectively, 78% methodical readers and 77% scanners.

This analysis focuses specifically on behaviour concerned with the overall design and navigation of the website(s) and on the users' interaction with the core multimedia story elements. In the following section, I will account for the participants' behaviour and interactions with the first part of the story. Table 1 demonstrates the participants' main interactions with core (multimedia) elements of the story.

Interaction:	Overview of the site/design	Watched video 1.1A	Competing attention body text/factual box	Watched slide show	Watched video 1.1B	Navigated to next part
Test person Sex/Age/						
Methodical:						
F/61/	x	x	x	x		
F/56/		x	x			x
M/18/		x		x	x	
Scanner:						
M/55/		x	x	x	x	
M/18/		x	x	x	x	

Table 1: Participants' interaction with story elements in the multimedia story.

All of the participants followed the linear reading path that the author-driven design suggests, starting at the top of the page and scrolling down. Overall, the saccades show that the participants first fixated on the left side of the page before fixating on the right side of the page. One of the methodical participants executed an informed overview of the overall site design and content horizontally and vertically before she started to read the story. The remaining participants started exploring from the top and moved downwards. All participants watched the opening video of the story.

Visually, this video ‘thumbnail’ covers nearly the whole screen with a ‘video play icon’ inserted into the shot. The action of clicking the play arrow is hence a highly probable behaviour, because it appears to be the immediately obvious interaction with the story. This test subject behaviour was also found in Russel’s study (2005). In the exit interview, all participants claimed to have found the opening video to be ‘very interesting and fascinating’. After watching the one-minute video to the end, all participants scrolled down the page. Four of five participants showed competing attention between the succeeding story elements—the body text placed in the left column (given) and the factual box placed in the right column (new) (Kress and van Leeuwen 2006). A visualisation of the fixation and saccades from one of the participants is shown in figure 2.



Figure 2: Fixations and saccades showing competing attention of ‘scanner’ between body text and factual box in AFCR.

Given the design of the two text blocks—with the same size columns but different font sizes and background colours—the readers’ attention is likely to be interrupted, because the differences between the designs can attract attention (Faraday and Sutcliffe 1997). If the size of the column of the factual box had been narrower with less salience than the column of the body text, the factual box might have been less captivating.

The methodical readers read the body text thoroughly and the scanners scrolled down and at times read a few sentences or a paragraph. The participants' eyes were fixated more often on the text than on the visual elements such as static graphic elements and maps. Two of the methodical readers and the two scanners watched parts of the photo-show. The size and placement of the photo-show is similar to that of the opening video: the thumbnail covers most of the screen and arrows indicate how to interact by clicking to display a new photo. This design signifies that there are no other story elements contending for users' attention, and this may explain the majority's behaviour. . Chu, Paul and Ruel's (2009) examination of slide show navigation, found that the test subjects (25) that chose the 'arrow' navigation method viewed 62% of the slides (40). Similar, none of the participants in this study explored the entire photo-show that implements 'arrow' navigation; instead, they returned to the main story after clicking through eight to ten of the 20 photos. Figure 3 discloses the presentation of the photo-show on the site.

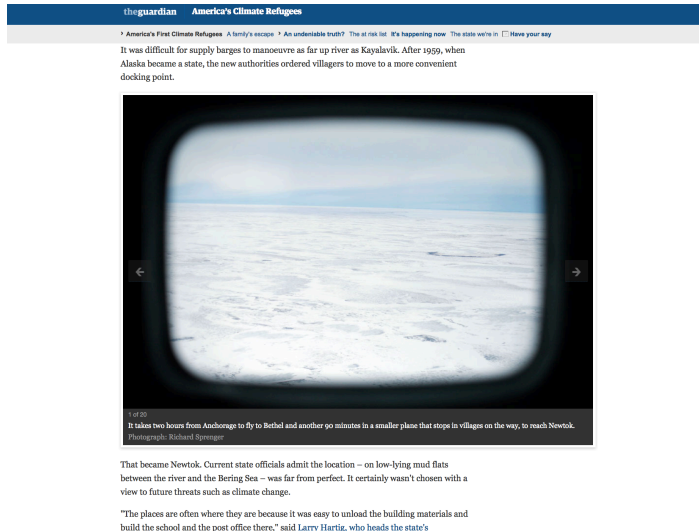


Figure 3: Screenshot of presentation of photo-show in AFCR.

When returning to the main story, the participants were exposed to more body text with indented static graphic elements. At this point in the experiment, from five to

eight minutes into the participants' exploring process, two methodical readers and the two scanners began to show declining engagement with the story⁷. One could say that the two methodical readers were starting to behave more like scanners from this point on. The exit interviews revealed that the participants lost interest because 'the story didn't grab me anymore' or 'the text was too long and complicated'. At this point, one of the methodical readers scrolled down to the bottom of the site and then scrolled up to the top of the site and started to read the factual box. The second methodical reader started to scroll down the site and immediately clicked on the play icon of video 1.1B when the thumbnail occurred on the screen. Scan paths revealed that the two scanner participants were also attracted to the decorative icon of the video thumbnail. The video thumbnail of video 1.1B is indented on the right side of the body text. There is no indication within the body text of when or where in the text reading process the video will suit the story line or reading path. Figure 4 shows the appearance of the body text alongside video 1.1B. (and one of the participants' fixations and saccades).



Figure 4: Fixations and saccades showing reading path of 'scanner' from body text to video 1.1B. in AFCR.

The action of close reading and scrolling can be characterized as a 'lean forward' activity (Hernandez and Rue 2016; Garcia on www.Poynter.org 2012) because it

demands active cognitive and physical participation from the users. The activity of watching a video clip can be characterised as a more 'lean backward' activity because the user can click on the play icon and watch the video without any further physical (or mental) engagement. A possible analysis of the participants' choices to interact with the video is that after reading and scrolling down through a considerable amount of comprehensive text in English language, the occurrence of the video offered the participants a 'needed break' in the lean-forward engagement. At the same time, after exploring the body text for a while, the visual stimuli of a colourful thumbnail of a smiling person presented as an offer image (Kress and van Leeuwen, 2006) with relatively close social distance might trigger the participants' attention and willingness to interact with the video clip. These three participants fixated on video 1.1B, but then closed the pop-up window after watching 2.30 – 3 minutes of the story, which runs for a total of 5 minutes and 20 seconds. The exit interviews revealed that the participants lost interest in the video story because the video story was 'dull', 'not exciting' or 'the content [was] too repetitive'.

The third methodical reader was not very observant of graphical elements and did not watch the photo-show during her reading; she continued to read the body text, abstained from watching video 1.1B and read the text all the way down to the bottom of the site, where she was the only participant to click on the navigation icon and move on to the next part of the series. There are various navigational options for switching between story parts; one can click and select a story part at the top menu of the website or read (or scroll) to the bottom of the website and find two different options for continuing to explore the story: either a double arrow indicating the next part or a horizontal content menu with textual headlines for all the parts of the story. Figure 5 discloses the bottom of the opening page of AFCR and the possible navigational options to continue to next part of the series with fixations and saccades of the only test person (methodological reader) that continued to the next part of the story.



Figure 5: Fixations and saccades showing reading path of ‘methodological reader’ of bottom of opening web site that shows navigational options for continuing to the next part of AFCR.

Four of five participants did not continue to the next part of the story when scrolling down to the bottom of the page. The participants hardly recognised the navigational menu at the top of the site, and the explanation given by the participants in the exit interview was that the opening video thumbnail captured their attention and eagerness to interact. When asked in the exit interview how they interpreted the navigational icons/menu at the top and bottom of the site, the consensus explanation was that they perceived the option of clicking on the icons or menu texts (links), but that they expected that clicking would result in leaving the story and lead to supplementary stories about climate change.

When the reader returns to the story after watching the opening video 1.1A, by scrolling down to the body text, the top menu is not visible anymore. There is a very narrow content menu at the top of the site that is visible while scrolling down the page, but none of the participants paid any attention to this visual feature. In sum, there are four different ways to navigate between story parts, and four of five

of the participants did not realise that these visual navigational alternatives would lead them to the next part of the story. These findings show discrepancies with the previous textual analysis of AFCR. All participants watched the opening video 1.1A and four of five watched part of video 1.1B, but they closed the latter video about halfway through. The photo-show was clicked on and partly screened by four of five of the participants. Two of three of the methodical readers changed behaviour and became scanners after reading about halfway through the main body text with the embedded static graphic elements.

Results of the survey

The survey was conducted immediately after the eye-tracking experiment and before the exit interviews. All participants reported that their preferred reading path was from top to bottom and from left to right, which correlates well with the observations of the eye-tracking experiment and hypothesis 1 in this paper. Since four of the five participants did not notice that the story consisted of three story parts (six sub-parts) and did not explore the visual navigational alternatives, the survey answers to these questions about the story provide insufficient relevance. I will therefore focus on the text-video relationship in the first part of AFCR in the following account of the findings of the survey. Half of the participants answered that the most plausible action is to click on the video thumbnail indented in the body text when it occurs on the screen, and two of five reported that the content of the video icon plays an important role when deciding whether or not to watch the video. All participants felt that the video stories contribute to the relevance of the story to 'a high degree'.

The content of body text and video, respectively, was investigated through the question: 'When is the single story part or the total story most interesting for you (more than one option is possible)?' All participants reported that the most interesting part of the story occurred when the text and video supplemented each other. Because there is an option of giving multiple answers, the absolute frequency of the other answers is difficult to stipulate for this question, but Figure 5 presents the data gathered in response to this question. Two methodical readers and one

scanner answered that the most interesting story occurred when the content was different and the oral sources conveyed different information in the two media forms. The last methodical reader and the other scanner answered that the story became most interesting when the text communicated facts and arguments while the video communicated engagement and feelings.

Spørgsmål 19

Dette spørgsmål handler om forholdet mellem tekst og video.

Hvornår mener du, at den enkelte historiedel (part) og den totale historie bliver mest interessant? (flere valg er mulig)

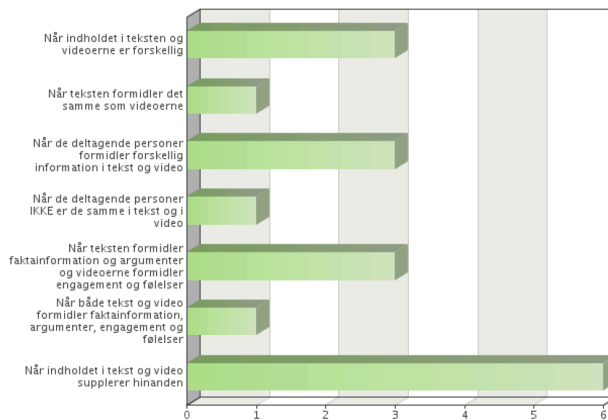


Figure 5: Distribution of answers in survey.

Discussion and conclusion

In this study, I executed an eye-tracking experiment combined with a survey and exit interview. In order to understand how readers experience the narrative flow of the multimedia story, the aim of the analysis in this paper was to identify patterns in users' behaviour and interactions with the different elements of the AFCR story. In the experiment, I observed that three of five participants behaved as methodical readers and that two of five acted as scanners. Due to the small scale of the eye-tracking experiment, I will characterise the results of the analysis and discussion as tendencies rather than generalisable findings.

Concerning the layout and visual navigation, participants tended not to recognise the navigational structure and design between story parts. The patterns of user behaviour showed that in spite of four different navigational options, four of five of the participants disregarded the possibility of moving on to the next part of the story. Hypothesis 3 can therefore not be confirmed by this study. The findings of Poynter's Eyetrack07 study (poynter.org, 2008), in contrast, revealed that navigation markers were the first stop for online readers. This could be interpreted as a discrepancy between the two studies, but the exit interviews revealed that the participants in this study noticed the navigation markers but misunderstood them to be leading to supplementary stories. One possible reason for the participants' misconception could be that the navigational visualisation of the AFCR story resembles the visual style of the main news website(s) of a number of Danish online news media (see, e.g., <http://politiken.dk/>, <http://ekstrabladet.dk/>), leading to the potential for confusion, as was seen in the participants' explanations. A supplementary explanation might be that the use of colour and the placement and visibility of the clickable links are inexpedient. The lack of connection between the visual design and the participants' interaction with the story indicates that the narrative flow between story parts does not function as intended by the producers. This experiment revealed that there are considerable tension-factors in play in the AFCR story when it comes to overall visual navigational design between story parts. The tendency observed was that the gap was simply too demanding for the news readers in the experiment to bridge (Engebretsen 2012).

The sequential structure of the total narrative may not have contributed to the lack of participants' interaction and perceptible narrative flow. If the placement of the arrows and internal hyperlinks within a sequential structure had been visible on the left or right side of the webpage when scrolling down, the salience of the navigational design might have appeared more distinct and hence attracted the participants' attention to the narrative flow to a greater extent.

The eye-tracking experiment did, however, reveal that the linear structure of the story, with body text and indented graphics and multimedia elements within a

single sub-section, functions as intended. Hypothesis 1 is supported by the saccades and fixations, because the participants followed the narrative flow through a reading path from top to bottom and from left to right, which matches the findings of the Poynter Eyetrack03 study and the findings of Nielsen (2006). Thus, we find that there is cohesion between the story elements, and the narrative flow is not interrupted by insuperable gaps.

Although this study finds that the test subjects focused more often on the body text than on visual elements, Hypothesis 2 is partly supported in the study. All the test subjects viewed the first video, four of five watched the slide show and three of five viewed the second video. Since the analysed part of the story is dominated by body text, the test subjects' attention was drawn to this element due to its prominence in the story's layout (Kress and van Leeuwen 2006). The change in user behaviour of two of three methodical readers and the two scanners indicates that reader engagement decreases about halfway through the first story sub-section. In addition, the four participants who viewed the photo-show and the three participants who watched video 1.1B all ended the screening about halfway into the sub-story due to diminished interest in the video or photo narrative. This indicates that the composition and/or content of both the body text and the sub-stories had difficulties capturing the readers in the experiment as the story progressed down the page. The answers in the exit interviews and the results of the survey with the eye-tracking participants indicate that the internal mix of the story elements, the substance of the content and the dimensions/duration of the story elements had a significant influence on the participants' engagement with the story.

Lengthy texts and video narratives tend to reduce the reader's engagement and interaction. Poynter's studies also found that the reader's perusing of a website is most extensive at the top of the page and diminishes when scrolling down. A study by Chen, Wilson, Cheng and Chang (2015) revealed that online readers prefer longer, high quality videos to any other type on newspaper websites. A 2014 report from the Pew Research Center found that the preferred median length of the most popular videos on YouTube was 2 minutes and 1 second, which is longer than the

median length of a local TV news story but shorter than the most common length for a network evening news package (Pew Research Center 2014). These two studies indicate that in order to maintain the reader's engagement and interaction, both the quality and the proportions of the news content must be considered. In *this* study, the participants closed the window of video 1.1B after watching about 2 minutes and 30 seconds of the more than 5-minute-long video, and two of the three methodical readers became scanners after reading about halfway through the body text. This participant behaviour cannot be explained only by the length or duration of the story elements; one must also take into consideration the actual form and content of each element and how the substance is organised and constructed. The rhythm (Kress and van Leeuwen 2006) of the whole narrative is also important when creating narrative flow between heterogeneous story elements. However, it should be noted that the structure and content of each story segment probably has an additional effect on narrative flow; each story element must present engaging content and an internal vehicle that drives the sub-story forward. The method of using an eye-tracking experiment obviously has a drawback here. This methodology alone does not reveal what content the participants actually perceive. The test participants' fixations and saccades indicate which elements attract their attention, but not whether the participants actually understood the substance of that content or why their attention would fade, disappear or increase. I have used a questionnaire and exit interviews to supplement the eye-tracking experiment and thus attempted to redress this limitation, but the experimental setting in itself may have influenced the participants' actions and attention. First, the experimental setting, with attached eye-tracking equipment and researcher surveillance, might have influenced participants' behaviour. Second, the participants were asked to read a story with a subject matter and form that might not interest them in the first place, and hence their behaviour may have been affected by these circumstances. These factors might have influenced the participants in various ways. The participants might have acted as more thorough readers than they would have been in a non-experimental setting. This might result in one receiving a classification as a methodical reader that might not be the case in another setting. The participants may also have been acting as scanners in the test

situation when they would have acted differently if reading the same story in a private situation. In the survey, I have posed questions that minimise this bias, and the participants' answers have closely matched their actual individual behaviour. I found that the participants largely described their reading practices in line with the actual reading patterns in the experiment.

I believe that despite the relatively small sample of participants in the experiment, the tendencies that were observed are relevant and effectively interpreted because each participant's data has been thoroughly researched and triangulated. Compared with Poynter's studies, the participants in this study perused a single narrative for about 20 minutes, where Poynter in *Eyetrack07* exposed a large sample of test persons to six stories with more than 350 specific elements over the course of 90 minutes (see also Nielsen et al. 1993). The studies are not directly comparable; Poynter's studies primarily focus on news website navigation and not on the navigation of a single 'stand alone' multimedia feature story, but I consider the findings of this eye-tracking experiment comparable within the limitations explained above.

In examining the eye-tracking experiment, survey and exit interviews in order to address RQ1, 'How does a group of readers respond to the structure, visual design and narrative flow of the presented multimedia narrative (AFCR) constructed within an author-driven linear reading path?', I conclude:

- Within part one, both the methodological readers (3) and the scanners (2) scrolled from the top to the bottom and the saccades and fixations showed a reading pattern from left to right on the page, which indicates that there is cohesion between the story elements and that the visual author-driven navigational design and the narrative flow is not interrupted by insuperable gaps.
- The participants lost interest in the story elements about halfway through the body text, slideshow and video 1.1B, which indicates that the story

elements might be too comprehensive in scope or repetitive in form or content.

- The participants (four of five) disregarded the possibility of navigating to the next story part, which indicates considerable tension factors in the overall visual design.

Through previous close reading and analysis before the eye-tracking experiment, the navigation between parts and chapters was found to be intuitive and logical without major tension factors in the AFCR story. The findings of the eye-tracking experiment led to different conclusions regarding the overall visual navigational design compared to the previous textual analysis. These divergent conclusions show not only that different methods and research goals lead to different results, but also that a close reading and textual analysis has limitations when it comes to relating to real world media experiences concerning a specific group of participant volunteers in an experiment. The process of close reading and textual analysis requires critical creativity and an exercise of logical reasoning in order to lead to analytical discoveries. The goal is to obtain approximate objective knowledge about the phenomena studied. This is in contrast to the readers' perception of the media text, which is an individual subjective experience. A factor that e.g. could play a role for the test subjects' navigation through the story is the individual engagement with the topic of given text. An experiment executed with a different case study could thus give another result.

The participants in the eye-tracking experiment expressed various experiences with reading multimedia feature stories. Three participants reported that they had read more than ten multimedia stories and two reported having read fewer than ten. Only one of the experienced participants (a methodical reader) navigated to the next part of the series. This indicates that the individual's experience with reading multimedia stories did not play a critical role in the experiment's findings.

My purpose in the research was to investigate the overall visual design and narrative flow, presuming that flow existed in the case study. The chosen case originated from a news organisation with ‘quality brand’ (Vekhoo 2010), and this anticipation might have led me to look for cohesion more than tension when analysing the overall visual design and narrative flow. Contrary to this, the activity of close reading and analysis over months is an agreed upon research method (Brinkmann and Tanggaard 2010) of submitting textual analysis. In doing this, the textual analysis demonstrated what vital structural, design and layout factors to consider when producing, evaluating and analysing the overall visual design and narrative flow of the AFCR story through an eye-tracking experiment. The findings of the eye-tracking experiment demonstrate the importance of relating textual analysis to real-world media experiences, which allows one to learn more about how multimedia news stories communicate to their audience.

The case study in this eye-tracking experiment is a longform ‘stand-alone’ feature story presented without commercials and other news stories or content competing for readers’ attention. This was not the case for the case studies of most other comparable eye-tracking studies. Compared to the research of deadline orientated news websites that employs eye-tracking experiments, this study represents a new phenomenon for investigation. It is also especially interesting to explore how the readers interact with this type of narrative because the narrative is constructed as an author-driven embedded multimedia story and thus resembles what Dowling and Vogan (2015, 212) describe as the ‘urtext’ of the multimedia longform genre.

The case study in this experiment is a longform feature story and the study represents only one attempt to investigate the overall navigation, design and the narrative flow of multimedia narratives in online media. Within a chosen (Flyvbjerg 2006) narrative, there are many factors that could be studied in detail, for instance how the readers perceive pictures, graphics and video that are integrated in the text. Additional studies are needed to increase the understanding of how narrative flow is created and opposed. More studies could feature other aspects of feature news

storytelling and utilise other methods in the understanding of visual navigation possibilities and narrative flow in embedded multimedia narratives. The ongoing digitalisation in media outlets and the experimentation and development of journalistic products may benefit from research addressing multi-methodological approaches.

Notes

¹ See Article 3 in this dissertation

² The experiment was conducted with the support of Peter From Jacobsen, Fagmedarbejder Update, DMJX.

³ <http://www.theguardian.com/advertising/advertising-demographic-profile-guardian-users>

⁴ All native Danish speaking.

⁵ The eye-tracking data of one of the participants is excluded from the study due to low quality of the data.

⁶ Poynter's studies are primarily focused on news website navigation and not on standalone multimedia feature story navigation.

⁷ Participants glanced away from the screen, drank coffee/water, changed sitting posture, heavy breathing, puffing, etc.

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ARTICLE 5: HOW DO THEY DO IT? LONGFORM MULTIMEDIA JOURNALISM AND PERCEPTION OF THE PRACTICE

How do they do it?

Longform multimedia journalism and perceptions of the practice

Kate Kartveit

Abstract

This paper is based on qualitative interviews with experienced media workers who work with or manage work within online multimedia off-deadline feature journalism in mainstream online media outlets. Using a phenomenographic approach, the question this paper seeks to answer is how experienced journalists, editors and graphic designers perceive how multimedia journalism is executed. In the outcome space, I categorise six different perceptions describing collective approaches to multimedia production. Conclusively, these perceptions can influence how competencies are developed and how the workflow of multimedia production is implemented and organised in editorial rooms and educational situations.

Keywords: Journalism, longform, multimedia production, off-deadline, outcome space, perception, phenomenography, qualitative interview.

Introduction

The phenomenon of ‘online multimedia journalism production’ is no longer new, and as of late, it has been adopted in both parented print media’s online news sites and on broadcast media’s web editions. Video, animations and interactive graphics have gradually been implemented in more traditional written online journalism outlets (Karlsson and Clerwall, 2012). Consequently, media employees are learning new skills (Boch, 2012), experimenting with different media types and working in

new ways in order to develop journalistic narratives and chase audiences (Thurman and Lupton, 2008). Multimedia productions are slowly becoming a considerable part of online media outlets' publishing strategy (Pew Research Center, 2014). To study the impact of multimedia production on journalism practice and on journalism products, it is therefore important to understand the current development in work processes and content development in online media.

The continuous technological changes in digital news media and their impact on journalistic practices have been discussed by various scholars (Pavlik, 2000; Boczkowski, 2004; Deuze, 2008). What these scholars have in common is that they do not regard (new) technology as an independent factor, but rather as one that must be seen in relation to established ways of executing the profession. They also argue that the way newsroom workers adapt to new technologies relates to different variations of organisational structures and work practices. These studies focus on the production of online breaking news or immediacy reporting, but as online journalism evolves, different journalistic genres are emerging with off-deadline work practices (Steensen, 2009a). This paper focuses on the practice of media employees who execute the specific genre of off-deadline multimedia longform feature journalism, as opposed to employees who work with daily news production. The aim of the paper is to study the practice of multimedia journalism production from the perspective of those who execute the Production of longform features. The research question of the article is formulated as follows:

RQ1: How do experienced journalists, editors and graphic designers perceive the execution of multimedia feature journalism in mainstream online media?

The analysis in this paper is based on qualitative interviews with experienced media workers who work with or manage work within online multimedia journalism in mainstream online media outlets. The interviews are analysed through an informed phenomenographic approach. In the outcome space of the analysis, I categorise six different perceptions describing collective approaches to multimedia production.

The categories of perception are assigned different metaphors, and these metaphors are structured in dimensions of variations from the highly to the less multifaceted. I conclude that 1) the categories of perception can influence how competencies are developed in editorial rooms and can thus potentially change or broaden the repertoire of interaction in journalistic and communicative processes, 2) the various perceptions of multimedia production could also influence the workflow of multimedia production and how it is implemented and organised in the editorial rooms and 3) consciousness of the different conceptions of perception of the professional lifeworld (Pink, 2011) of journalistic multimedia producers can be implemented in educational situations.

Literature review

Scholars have studied the practice of online news production from different perspectives. Boczkowski's (2004: 208) influential study of three online media outlets in the United States found that new technology has been incorporated into pre-existent practices, although material changes do not necessarily determine editorial processes, which are instead shaped by organisational structures, work practices and representation of users. Deuze asserted that professional demarcations are degrading in modern media institutions and that journalistic identities are challenged and altered due to rapid developments in technology, work routines and economic pressures (Deuze. 2007: 110, 153). Lewis and Usher (2014) investigated the interactions developing between journalists and technologists and the factors that influence how they might come together around the common purpose of news innovation in the transnational grassroots organisation Hacks/Hackers. This study implemented a grounded theory approach and 'trading zones' as an explanatory framework. It also asserted that the fusion of different professional groups requires a significant, coordinated and sustained effort to succeed, and that these factors might be more difficult to achieve independently in grassroots organisations than in cooperation with legacy media. With a sociological Bourdieuan perspective, Hartley's (2011) study found that the journalistic and editorial decisions about web publishing among traditional print media organisations are characterised by a

radicalisation of time and technology. The concepts of breaking news and exclusive news have therefore become the main apparatus of competition for online news media.

Karlsson and Clerwall (2011) implemented qualitative interviews in combination with quantitative content analysis in their study of multimedia in four Swedish online media outlets between 2005 and 2010. The multimedia content changed over time, rising from a mean of 3.25% in 2005 to 25% in 2010. Karlsson and Clerwall concluded that news sites are deeply situated in an institutional professional culture where traditional journalistic preferences and forms of publishing are the yardstick guiding developments rather than performing any brave experiments in innovation. In contrast, Thurman and Lupton (2008) studied the implementation of multimedia content in nine British media outlets through qualitative interviews and a discursive analytic approach, and found that the speed and extent to which the changes were taking place was dramatic. The study revealed a high degree of experimentation in mainstream news providers' approaches to multimedia, with no clear certainty of what would fail or succeed. In the extension of this, Steensen's ethnographic study (2009b) on the production of feature journalism in a Norwegian online newspaper suggested that innovation is a process by which organisational structures and individual agency interact and claim that individual action has been downplayed in previous research in the study of innovation in online media (2009b: 825).

There is no doubt that this discerning selection (from a large number) of studies has contributed to a deeper understanding of the practice of online journalism and editorial processes. There is a great variation in methods and phenomena contributing to the understanding of development in the current media landscape. Most studies are, however, concerned with the deadline orientated newsroom workflow, and the impact of structural factors, technology and audience relation (Boczkowski, 2004; Singer, 2004; Domingo, 2006; Bock, 2012). In a phenomenographic context, a relevant question would be: 'How do experienced media employees understand and perceive the execution of multimedia journalism?'

In other words, the focus point of this study is the subjective perception of the participants' professional lifeworld. Furthermore, the data of this study are not generated from media workers who practice journalism within a daily news flow, but rather among participants who by choice have participated in the production of longform multimedia features. By studying multimedia production from these media employees' perspective, we can learn about off-deadline journalism practice and gain a deeper and more comprehensive picture of the profession, see how professional knowledge is created and disseminated and examine how perceptions vary (Larsson and Holmström, 2007). The research approach applied in this study, phenomenography, originally evolved from an educational and learning framework used in Sweden in the 1970s (Marton 1994, Svensson 1997), but it has since been implemented in research within areas including the health care sector (Homlström et al. 2003; Dall'Alba, 1995) and other professions. Within journalism education, Steel et al. (2007) explored the application of an experiential learning approach to postgraduate journalism education through a partly phenomenographic approach. Within research of 'journalism practice', I have not found studies applying a phenomenographic methodology¹. Having been a broadcast employee for 20 years, I argue that a phenomenographic approach is an especially interesting methodology to apply because I have personal experience with the lifeworld of media production, the journalistic processes thereof and the obstacles and criteria for success.

Methodology

The data collection and analysis of this study is conducted through the implementation of a phenomenographic approach (Marton, 1981). Both phenomenography and phenomenology are based on a lifeworld perspective and have the same underlying ontological and epistemological assumptions. In contrast to a phenomenological approach, which aims to clarify the structure and meaning of a phenomenon (Giorgi, 1999), phenomenography seeks to describe the different ways a group of people understand that phenomenon. Put simply, the aim of phenomenographic research is to study the variations of how people experience, understand or conceive a phenomenon in the surrounding world (Ashworth and

Lucas, 2010). The analysis is not directed at the phenomenon itself, but at the deeper perception of the perspectives of practitioners of a profession or lifeworld situation. The variations and similarities in the way people comprehend the phenomenon are referred to as a second-order perspective (Marton, 1981). The focus of interest is thus about different understandings of perception and how the interaction between the subject and phenomenon create meaning. The goal of the analysis is to find and systematise forms of thoughts in terms of how people interpret aspects of reality (Marton, 1981).

The preferred data-collection method in phenomenographic studies is open-ended qualitative interviews, but open-ended writings from participants are also an option. The informants are encouraged to speak freely about their experiences through concrete examples from the lifeworld (Goodwin 2000). The interviews are recorded and transcribed verbatim. The semi-structured qualitative interviews of this study were conducted from March through November of 2014. The duration of each interview varied from 20 to 45 minutes and the number of interviews was 13, which is satisfactory for most in-depth interview projects (Åkerlind, 2012).

The participants in the study were selected on the basis of three criteria: 1) International perspective — Europe, the USA and Oceania are represented; 2) A variation in parented media — Legacy newspapers and broadcast media with online editions are represented; and 3) Experience — The majority of the selected media institutions and participants have extensive experience with journalistic multimedia feature production. To be specific, the participants were partly selected on the basis of an information-orientated search strategy (Flyvbjerg, 2010). First, I searched for exemplary, international online feature stories with extensive implementation of embedded multimedia elements (Hernandez and Rue, 2016). Then I contacted the producers of the stories and requested a research interview. I also contacted scholars engaged in multimedia research in the USA, the UK and New Zealand asking for help to identify media workers who had produced ‘exemplary multimedia productions’. Based on these criteria, the following participants were interviewed:

Jon Bones, Senior Reporter, VG, Norway
Chris Burton, Journalist, New Zealand Herald
Sinead Boucher, Group Executive Editor, Fairfax Media, New Zealand
Amanda Cox, Graphics Editor, New York Times
Nick Davey, Senior Graphic Designer, Visual Journalism, BBC News
Amanda Hickman, Online Journalist and Lecturer, City University, New York
Alison Hurt, Graphics Editor, National Public Radio, USA
Wes Lindamood, Senior Interactive Designer, National Public Radio, USA
Francesca Panetta, Multimedia Special Projects Editor, The Guardian
Aron Philhofer, Multimedia Editor, New York Times (pro tempore, Executive Editor of Digital Media, The Guardian)
Lucy Rodgers, Senior Journalist, BBC News
John Walton, Senior Broadcast Journalist, BBC News
Mary Jo Webster, Data Journalist, USA Today (pro tempore, Computer-assisted Reporting Editor, Minneapolis Star Tribune)

Eleven interviews were video recorded, one was audio recorded and one interview was conducted face to face without recording. The interviews were transcribed verbatim. A list of open questions was developed before the interviews took place (Kvale and Brinkman, 2008). The question list followed a path through the production process of a multimedia presentation, from planning the story to the finished product. The question list was not strictly followed, but progressed according to the answers of the participants and with inserted follow-up questions. During the interviews the participants reflected on concrete multimedia productions they had worked with. Special emphasis was placed on the participants' reflections around experiences with successes, difficulties and problematic aspects of the production process and a sub-focus in the interviews was how they perceived the creation of narrative flow in multimedia features. The answers to these questions encompass both structural and referential aspects of the multimedia production process, making it possible to study both the 'what' and 'how' aspects of journalistic multimedia production: *when* the informants talk about the phenomenon, *what* do they talk about and *how* do they talk about it (Larsson and Holmström, 2007).

In phenomenographic research, the data analysis can be carried out in different ways. I followed the methodology described by Holmström, Halford and Rosenquist (2003) and Larsson and Holmström (2007). The goal of the analysis is to

arrange perceptions unearthed in the interviews into specific ‘categories of description’ that are mutually exclusive. These categories are often referred to as an ‘outcome space’ and are the researcher’s abstractions of the different perceptions that have been identified (Hodgson, Trean and Shah, 2012). This outcome space contains the collective variations of conceptions of a phenomenon, rather than the sense-making of an individual research participant, and describes the different ways a phenomenon can be interpreted. The categories are usually related to one another in a hierarchically inclusive relationship (Marton and Boot, 1997), but they can take on other relations. The outcome space can either be derived from the data or a result of theoretical analysis of the categories. Following this concept, I first read through all the transcribed interviews multiple times. In this stage, I focused on and marked the ‘what’ aspects of multimedia production: the things the participants see as challenges and difficulties with the content production and what storytelling strategies are implemented in the process. Each participant’s predominant perception of the journalistic practice was then accounted for, and an initial set of descriptive categories was formulated. The descriptions were grouped and categorised based on similarities and differences. This was done in a table I developed for the purpose. I then read through the interviews and focused on ‘how’ aspects, such as how the participants described the working process, how difficulties were articulated and how the production practice was influenced. Next, I re-read and re-sorted the participants’ statements, formulated the final categories and assigned a metaphor to each description category. Finally, I searched for a structure in the outcome space and created a visualisation of the structure.

Data analysis

In the analysis of the interviews with the media employees, six perceptions of the production of multimedia stories were identified. The categorisation of the perceptions represents the central meaning of conceptions and describes differences in the participants’ explanations of their experiences with the phenomenon of ‘multimedia production’. The categories do not characterise each participant, but are the collective output of the analysis and should be regarded as dimensions of

variation. This implies that the statements from one participant could be assigned to multiple categories because the participants were reflecting on and interacting with the phenomenon as well as striving to create meaning during the interview.

A metaphor was assigned to each of the categories. The appointed metaphors illustrate six ways of relating to and comprehending multimedia production, and should not be understood as a typology of media workers or a categorisation of individuals. The six metaphors are:

1) The learner

The metaphor of 'the learner' describes someone who understands multimedia production as a learning experience. The implementation of multimedia content in online media has forced journalists, especially those with primary working experience from the written press, to challenge their storytelling competencies. The learner describes the implementation of video, animations and interactive graphics in the journalistic practice and communication as a 'learning by doing' experience. Graphic designers and editors also express the conception of being in a learning process when producing or managing multimedia productions. When asked what competencies he or she is leaning on in the multimedia production process, one of the participants answered:

I am still learning ... I don't actually know. I'm finding it is something that is offering the way. I have to think about how I've normally done my journalism, which has been primarily in print, so I have to rethink it and... ahh... start trying to look at possibilities. (Journalist)

The new possibilities and options in multimedia storytelling, as opposed to single-media storytelling, are challenging, but another participant articulates the interest in learning and looking for answers.

I wish I had an answer for you. I am not sure I do. There must be some ... people out there who can help figure that out. (Journalist)

Concerned with the creation of narrative flow between story elements of different media types one of the participants explains:

But I think that getting those transitions right are hard, making it feel like a coherent piece, instead of like there is interruptions in the middle, is still something that people are figuring out. (Graphic designer)

The participants in this study are all experienced media employees, but the experience of being in a learning position is commonly articulated in the data. Further progress of the description of a learning situation is that of exploring the multimedia production process.

2) The developer

The metaphor of ‘the developer’ refers to someone who understands multimedia production as an experimental process. The difference from the metaphor of ‘the learner’ is that the production process is perceived as being more planned and conscious. The implementation of multimedia is described as a process of experiencing possibilities and how the advantages of different media types can work together.

You know... you’re kind of experimenting and have no examples of reference ... you know ... you have to just kind of go blind and to go well. (Journalist)

The need for a story that ‘works well’ from the participants’ perspective is described as significant and important throughout the data, but there is also an interest in exploring what multimedia content can contribute to the story.

Sometimes it’s really just, what do I want to experiment with in this ... this particular story. What do I think will help people understand it in a way that they are not going to understand just by reading it. (Journalist)

The developer assesses multimedia production in a more analytical and exploratory manner than the learner. The creation of story flow between elements is articulated by one of the participants as:

So we were using the video for a quite distinct job, we didn't want it to bare the whole story, we wanted it to summarize the story and to create interest that would lead into the rest of the page. (Journalist)

The evident reflection of this quote shows how the developer in a conscious manner assigns one media type to a specific role in the narrative. But among the participants there are other factors at play.

3) The artist

The metaphor of 'the artist' describes a worker who understands multimedia production as a playful, intuitive process. This metaphor differs from 'the learner' and 'the developer' in that the production process is fundamentally perceived as an 'instinctive' path. The intuition is formulated as based on experience within journalistic practice and knowing how to construct a journalistic story.

I think people choose things either based on personal experience, science or instinct, and everyone likes to say that they choose everything by experience or science; really, let's say people choose them for gut instincts... (Graphic Designer)

However, instinct or intuition as the basis of making decisions in the journalistic process is also applied with a creative perspective.

You figure you have these new toys and for the first time we can try out these different things in the middle of the story, so I think to some extent people just now are playing with their new toys. (Graphic Designer)

On the other side, the multimedia production process is not an unconscious activity.

On some level ... we're all figuring this out, but I do try to challenge myself ... to ... ah ... I wanna say put some evidence behind my intuition. (Journalist)

The artist differs from 'the learner and developer' in the perception of multimedia production as a process built on esoteric knowledge by articulating the practice as a perception of intuitive playful activity.

I think if your elements are all integrated into your story, I think the flow is naturally there, certainly about the piece that I'm doing on NN (story anonymised by author), I tried, I mean there's a video in the piece ..mm.. and there's also graphics and text and the text leads to the graphics and the graphics lead then to the text which leads on to the video and they all come in the right time, so that would be one piece of advice I guess. (Journalist)

The concept that multimedia production involves different areas of expertise and work processes is found across the data. The fourth metaphor is thereby concerned with co-operation in the production process.

4) The collaborator

The metaphor of 'the collaborator' applies to someone who understands the multimedia production as teamwork wherein different competencies play together. The necessity of all groups involved in multimedia production to be able to work in new ways and to work closely with other professions is highly emphasised.

Definitely, our team is definitely a collaboration. You can't produce anything without a good working relationship between designers, developers and journalists; it's essential. (Graphic Designer)

The cooperative work process within multimedia production has influenced the workflow in the newsroom.

I think one of the biggest changes is that journalism has become more of a team effort and not just a single person on the story..(.....) It is very unusual to see one person who can do all of that and do it really well. I think this is one of the biggest changes I've seen in the newsroom... (Editor)

Additionally, for some media workers, this development in journalism practice has increased job satisfaction.

What I like about the possibilities of online [journalism] is the ... you know, the wonderful collaboration of the team with people getting together to produce something. (Journalist)

The collaborator concedes the necessity of teamwork and collaboration in multimedia production due to the need for specific media production knowledge, technical skills and design competencies. Media workers also focus their attention on the audience's experience.

5) The publisher

The metaphor of 'the publisher' represents someone who understands multimedia production as the implementation of new means to enlighten the audience. One of the participants expresses thoughts on the use of multimedia as a method by which to enhance the audience's interest in the story.

It's all just storytelling. It's all just trying to ... trying to think about who your audience is and how ... and what they need to know and why you're telling them this story. (Journalist)

The participants' concern for the audience's interaction with the media content is also expressed by the media workers trying to see multimedia storytelling from the users' point of view in order to create a story that the audience can easily navigate.

...The average time spent on a single story ... you know ... isn't a huge amount, so you have to be aware of what commitments people have in their time. (...)... All these decisions are informed around the story, but they have also to be informed around the audience. Understanding what your audience is going to do. (Journalist)

The awareness of and importance placed on the audience's experience with the multimedia story are further expressed as producing stories that have a reassuring narrative flow.

(What) I say to our team is, I don't want anyone to think about the experience or actively think about what they have to do ... let the story just flow naturally so whether that they might be reading a little piece and then come down and a relevant video just starts to play simultaneously, something kind of comes in when it's time... (Editor)

The publisher comprehends multimedia productions as one method (of many) to help serve the audience. This perception is in line with the philosophies of ‘public service broadcasting’, which refer to broadcasts intended for public benefit rather than to serve purely commercial interests and ‘fourth estate’ that refers to the independent and critical role of the press. However, there is also the realisation that multimedia is not a magic potion that can solve the media industry’s challenges. This leads to the last metaphor of the analysis.

6) The manager

The metaphor of ‘the manager’ refers to someone who understands multimedia production as a resource to reach and retain new audiences. In this perspective, the implementation of multimedia is one of multiple means to sustain a market share and provide a means of survival in a competitive industry.

Newsrooms are used to just sort of publishing and then crossing their fingers, and that just has to change ... umm ... It has to change because this is like survival at this point and at a time where resources are declining everywhere, we need to know that this (multimedia) works ... We need to know that this story form, this design treatment works and it doesn’t work just based on gut instinct – it works based on data. (Editor)

The manager takes a more distinctive economic and organisational perspective of the implementation of multimedia content in online media than the publisher, but in the manager’s perception of multimedia production, we also find a call for factual knowledge of how and why multimedia content contributes to journalistic presentation and audience interaction.

The creation of narrative flow in journalistic multimedia productions is according to the participants in the study a process that is characterised by certain considered choses, experimentation with types of content in different media forms and use of esoteric journalistic experiences. None of the participants articulated that they employed system of ‘narrative theory’ or narrative templates when constructing the multimedia stories. In contrast the creation of a narrative flow was considered as

‘something that people are figuring out’ (learner), and that video was used for *‘create interest that would lead into the rest of the page’* (developer) and that *‘the flow is naturally there’* (artist). But across the data the question of how multimedia content creates meaning for the audience is a concern. The participants are apprehensive with regard to how the user interface of the multimedia stories works. The design and content organisation are tested on peers and/or family members through practicing what the respondents call ‘guerrilla testing’.

So you would just go and find somebody and say please can you have a look at this and see how they behave. Are they finding the information in the right places? Are they following the narrative? Are they looking at all the information, or just some of the information, are they just watching the video? (Journalist)

This experiential testing process of user interaction is (in some media institutions) supplied by focus-group experiments and tracking of online user behaviour, but the collective output of the data shows that the media workers trust their own peers’ judgement more than specific theoretical or scientific approaches.

Outcome space

The six metaphors represent the collective output of the analysis of the qualitative interviews. The last step in the analysis was to investigate the internal relations and differences between the assigned metaphorical categories in order to search for a structure (Åkerlind 2012) of variations that could potentially provide answers to the research question of how experienced journalists, editors and graphic designers understand the execution of multimedia journalism. Figure 1 shows my interpretation and reflection of the dimensions of variations of the categories and constitutes the final outcome space.

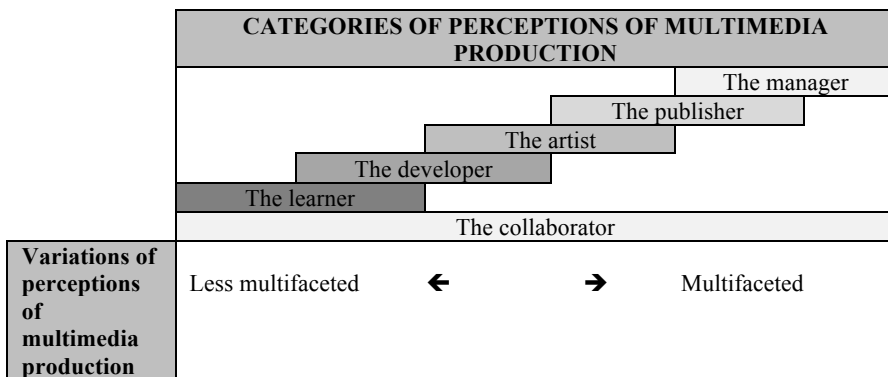


Figure 1: Outcome space of dimensions of variations of the perception of multimedia production.

The outcome space vertically shows a hierarchy of the variations of perceptions of multimedia production from the learner to the manager, as discussed above. The collaborator’s position in the hierarchy is visually placed at the bottom, but should be understood as a metaphor that works across all the categories. Horizontally, the visualisation shows how the categories of perceptions are related on a scale from less to more multifaceted.

The structure and meaning of the participants’ experience and perception of multimedia production can be found in both pre-reflective and conceptual thoughts (Marton, 1986). The publisher and the manager metaphors both have an overriding perspective in the perception of the execution of multimedia journalism. The participants’ reflections on multimedia implementation take organisational issues, the production line and the relationship with the audience into consideration. In proportion to the dimensions of variations in perception multimedia production, this perspective is the most multifaceted perception of the implementation and execution of multimedia content, meaning it has the most comprehensive understanding of the perceptions.

In the dimension of variations between the different metaphors, the learner has a less multifaceted perception than the developer, who in turn has a less

multifaceted perception than the artist. That is, in a hierarchical structure, the learner is subordinate to the developer, who is subordinate to the artist. One could say that there is a path in the perception of the multimedia production process that originates from the conception of being a learner, advances through the perception of being a developer and then becomes that of an artist. Since the data analysis displays the collective output of the interview data, the individual participant might understand multimedia production within many or all of the categories, dependent on which part of the production process is being discussed. Simultaneously, the data shows that the participants' perception and professional development is a continuous process and not considered a linear course from novice to expert. Along with the implementation of new technology and new software, experience with the production form and collaboration with other professions, the learning process and practice progresses in cycles or spirals (Kolb, 1984; Gynnild, 2006). The categories of perceptions also indicate that the professional competencies are not just a set of attributes or skills, but rather that the employees' ways of conceiving the work (processes) influence what competencies he or she develops and uses in performing the work (Sandberg, 2000). In other words, for example, the learner's notion of the multimedia production process as 'learning by doing' might be based upon a specific conception and perception of the work process and thus affect and form how the knowledge production is generated, namely by personal experience. The developer's and artist's perception of multimedia production might likewise influence how knowledge and skills are developed into distinctive competencies in performing the work. Thus, depending on the conception of work, a specific set of knowledge, skills, and other attributes is developed and maintained in work performance (Sandberg, 2000). All of the participants in the study articulated a perception of collaboration between professions as essential to multimedia production. This perception is an underlying premise for the production of multimedia content; and within the dimensions of variations in the categories, we find both highly and less multifaceted perceptions of the collaboration component.

The hierarchy of the internal relations between the different categories discussed above demonstrates an increasing comprehensiveness of understandings of perception in multimedia production, specifically via an increased awareness of the complexity of the work process and the implementation of organisational, economical and audience perspectives. The hierarchical structure demonstrates that the categories with the most multifaceted conceptions are able to understand the less multifaceted ones, but that the reverse is less likely to be true. However, it should be noted that this is not empirically confirmed in the data, because my analysis is based on the collective output of the data and not on a typology of media workers or categorisation of individuals.

Discussion

I have analysed 13 qualitative interviews conducted with a group of media employees, using a phenomenographic approach. The analysis shows a structured description of the different variations of perceptions of the phenomenon of carrying out multimedia journalism. The outcome space also demonstrates the multifaceted differences in the perceptions of multimedia production and can therefore possibly explain why they act in different ways in the planning and executing of the professions. The analysis investigates how media workers collectively make sense of the multimedia production on a cognitive level, or how they act in relation to the world they experience (Marton, 1986).

A learner, on one level, has less experience in specific areas and less practice than a developer or an artist, and might have to apply more effort to executing the production. A developer experiments with the multimedia production, but lacks the intuitive instinct of an artist with regard to how to accomplish what the participants consider ‘well-working stories’. To a greater extent than the other categories, the publisher and manager focus on organisational issues, the audience’s perspective and market issues. Furthermore, on some levels, participants’ reflections on the practice are more multifaceted than others and might be linked to different methods of acting in the collaborative production process. For example, the perception of how to execute a concrete assignment is linked to the degree of

specialisation between the different professions. Some organisations have a clearer division of labour in the production line while others work in teams, where the content, design and presentation is developed collectively.

The fact that the data consists of raw material from participants from different media organisations with different nationalities and dimensions such as size, organisation and media values (Hallin and Mancini, 2004) could weaken the validity and reliability of this analysis. The question at stake is whether the results of the analysis would be different if the participants represented organisations that were directly comparable in dimensions other than ‘profession’ or if the object of the study was the practice of employees in one single media outlet. There is no final answer to this. Conversely, the analysis could also be regarded as more valid as a result of these factors, since the participants represent a wide range of media outlets and the examination focuses on the participants’ perception of multimedia production rather than on specific effects or influences by other dimensions as structural factors, technology or audience perspective. Still, in general, the data shows very few differences in perceptions amongst the participants from different media institutions. The challenges of multimedia production are similar for parented legacy print media and broadcast media across continents. This is also confirmed across the data through the participants’ articulation of how they study other national and international online media outlets’ multimedia productions in order to be inspired and learn from them.

Another critique of the analysis is the fact that the participants represent different professions. In the data, we find three participants who possess managing positions, four participants who work with graphics/design and six participants who work as journalists. A different general approach and focus on the relationship between tasks and professions might influence the result of the analysis. For example, a participant in a leading position might take a more holistic view of the work process and product than a participant who has a specific role to fill, such as a graphic designer. On the other hand, since multimedia production is predominantly a teamwork activity, the conclusions might have been prejudiced if only a single

profession (e.g., journalists) were present in the study. By including the three main professions participating in multimedia production, the conclusions of the analysis are more comprehensive and demonstrate the participants' collective perception on how simple or demanding the implementation of multimedia is in online longform feature production.

The findings in this study do not seek to formulate general principles about how things appear in the editorial rooms, but to qualitatively describe the different ways (variations) a group of media employees make sense of, experience and understand the multimedia production process. By conducting this study, I believe I have contributed to a deeper and more comprehensive understanding of the profession, how professional knowledge is created and disseminated, and how the perceptions thereof can vary.

Limitations of the study

Phenomenography as a research approach originally evolved from an educational and learning framework and has since been applied in various lifeworld experience studies. One commonality in many of the studies is that the phenomena investigated are concerned with professionals such as teachers, engineers, nurses and other health workers (Sandberg, 2000). Journalism is not a protected profession in the sense that the practitioner holds a licence; anybody can, in principle, be a journalist (or an editor). Nevertheless, journalism and its practitioners have much in common with the 'licenced professions', such as ethical conducts, specific labour organisations, fourth estate obligation, specialised journalism schools and continuing professional development institutions. Journalism is not a static profession and the media is constantly developing, both in terms of content and organisation. From this perspective, there is a demand for journalists and media workers to develop and learn throughout their working lives. Phenomenographic research could thus enlighten the condition(s) of the profession(s) by mapping different phenomena and how the perception(s) of these phenomena varies. Here, however, I am aware that three main, critical questions can affect the validity of this study as a phenomenographic approach as developed by Marton. The first objection is that the

categorisation of perceptions can be interpreted as describing roles or people more than what they describe when discussing multimedia production practice. An emphasis on the variations of aspects or themes in the participants' concepts of multimedia description would be a more 'pure' phenomenographic approach that would call for a different focus in the conducted interviews and in the analysis of the data. Nevertheless, I argue that my analysis clearly differentiates between people/roles and the participants' conceptions of the multimedia work processes because it is the variations and differences in the way the participants comprehend the phenomenon (second-order perspective) that is in focus.

Additionally, one might question whether or not the participants were truly describing different aspects of the same phenomenon, as they were considering different experiences of different multimedia productions in different media institutions. My refutation of this claim is that the working process of creating multimedia is comparable across media institutions. The execution of journalism might have various overriding cultural, economical and organisational frameworks across continents and media types (Hallin and Manchini, 2004), but in the Anglo-Saxon tradition of concrete implementation of multimedia production practice, the data confirms that, independent of associated media institutions, there is a convergence in the participants' descriptions and comprehension of the perceptions and challenges of the work processes in multimedia feature production.

Third, it can be questioned whether or not the phenomenon investigated – multimedia feature production practice – is too vague a concept. Multimedia feature production involves numerous sub-processes and many professions, and a more narrow selection of specific aspects or themes in the production line could impact the outcome of the study. Taking these critical objections into consideration, the study might be more correctly described as informed phenomenography² rather than 'pure' phenomenography.

Phenomenography, though, has its limitations. The approach has been criticised for 'weak links to theory' (Harris, 2011), and there has been a continued

examination of issues of validity and truth claims by researchers such as Sandberg (2005). There are restrictions to most research approaches, and this emphasises the importance of paying direct attention to the limitations of the methodology and the findings of the analysis. The findings in this study are the result of a specific sample of Anglo-Saxon participants who live in a specific professional lifeworld. The analysis represents the collective outcome of how these media employees can understand multimedia production.

One could ask how the study contributes to scientific progress about the understanding of the production of multimedia feature content? I argue that knowledge about the variations of how those who carry out the profession understand the phenomenon is contributing to scholarly development within the specific field of journalism practice studies. The point of departure has been to study the off-deadline media workers' perception of the multimedia feature production process(es). By studying the perceptions of media workers who are, so to say, adjacent to the daily online news production cycle and its demands for rapid work processes, liquid work routines and (forced) cooperation and multiskilling (Deuze, 2007; 151), it may be possible to recognise patterns and perceptions that are not 'polluted' by these 'noise' factors in online news media. In this context, the phenomenographic approach seems appropriate because it allows the researcher to focus on the perceptions of the informants and to refine the findings into metaphors that condense the collective output of the data. The metaphors could be a suitable tool when discussing online longform journalism practice, its challenges and future perspectives. In relation to other studies of online journalism practice, this study is an attempt to focus less on stress factors and instead focus on the fundamental work practices of multimedia journalism production. The study is not exhaustive on the understanding of the whole process of multimedia production and the professional lifeworld of the participants, but it enlightens a specific part of the field. I have not triangulated the findings of the study. A comparative study with findings from other research, other research analysis techniques, or other methodological approaches, such as anthropological or ethnographic studies, or the use of discourse theory,

grounded theory or experimental/laboratory studies, could provide more information on the conceptions of longform multimedia feature production.

Conclusion

The aim of this paper was to answer the research question: How do experienced journalists, editors and graphic designers perceive the execution of off-deadline multimedia feature journalism in mainstream online media? To answer this question I have conducted a phenomenographic analysis using data generated from qualitative interviews with experienced media employees. I have identified six variations of perceptions of the execution of multimedia production and assigned a metaphor to each, these being the Learner, the Developer, the Artist, the Collaborator, the Publisher and the Manager. The perceptions have been structured according to internal relations, and in relation to the dimensions of variations, ranging from very to less multifaceted in terms of perception of the multimedia production process. The outcome space has been depicted in Figure 1, and the implications of the findings have been discussed.

The execution of journalism and similar professions is a continuous learning process, and the findings of the phenomenographic research process can contribute to the understanding of how and why media employees carry out their work the way they do. The six variations of perceptions of multimedia production are concrete, applicable categories of conceptions that illuminate the field of journalism practice. In following the findings of this study, I point to three possible implications for further research, both for the media institutions that produce journalistic multimedia stories and for journalism education.

- 1) The categories of perception can potentially influence how competencies are developed and how institutions might change or broaden the repertoire of interaction in the newsroom. Consciousness about the different perceptions of the work process and knowledge of the strengths and weaknesses of the different conceptions may help us understand why collaboration processes fail and succeed.

2) Comprehending different ways of seeing the work process and how knowledge, skills and other attributes are developed and maintained in work performance can influence how multimedia production is implemented and organised in editorial rooms. Awareness among editors, journalists and other professional groups concerned with the different perceptions of multimedia production could help to assemble teams and working groups that ‘fit together’ or challenge each other. The purpose might be to create teams where the participants learn from each other’s competencies in the different sub-processes. This could be one among many means that can be implemented to increase expertise and professional development among employees.

3) The phenomenographic approach can be employed to map different phenomena, allowing researchers to use the conclusion(s) in educational situations, both in academia and in continuing professional development. Both students and professional media workers need interpersonal skills and consciousness about the variations in how media workers understand their lifeworld, open up to new ways of perception and consequently progress and work in new ways.

Powerful economic forces and rapid technological development has pushed multimedia journalism into a field of constant development. Both the practice and the content of multimedia feature productions are changing and taking new forms even as I write, making this an especially challenging field of study. Therefore, additional studies are crucial to understanding the complex processes that take place in online media rooms and media institutions.

Notes

¹Boolean search for ”Journalism AND phenomenography” in AAU’s library data base, separate searches in Taylor and Francis’ journals and Sage journals and Google Scholar search.

²Term suggested in email by Vivien Hodgson/Ference Marton in feedback on the article.

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CHAPTER 4. CONCLUSION AND CLOSING REMARKS

I began the Summary of this dissertation by presenting the main research question of the dissertation: How do the visual design and content elements in longform embedded multimedia news stories work together to create a narrative whole? How does the audience experience a longform multimedia feature and furthermore, what significance does longform multimedia production have on media employees' perception of the practice? The five articles included in this dissertation outline the methods, theories and findings of my attempt to answer these questions. The conclusions of the articles are presented in the articles and in Chapter 2, and I will not restate them in this concluding chapter. However, I will, in the context of the research questions of the articles, point out the scholarly contributions of this dissertation, discuss potential future consequences of the changes addressed here and suggest areas for future research.

The specific media texts investigated in this study feature the genre of standalone multimedia longform feature narratives. Further, the journalistic practice is studied through the lens of the perception of media workers that produce longform multimedia feature journalism, and reader responses to a longform multimedia feature story are investigated. The phenomena investigated are, so to say, adjacent to the daily online news production cycle and its demands for rapid work processes, liquid work routines and (forced) cooperation and multiskilling.

Chapter 1 and Article 1 of this dissertation discuss scholarly works and approaches that I have found relevant to present here, with the objective of reviewing academic works within journalism research in general and multimedia journalism research in particular. The aim of the latter was to recognise 'the gap' in scholarly works concerned with narrative structure and flow in multimedia journalism, and to present the scholarly context and position in the field of the three additional research articles. Article 1 contributes with a review of scholarly works

within the specific focus of this dissertation. The scholarly works are discussed and categorised within three research areas: ‘Studies of presence of multimedia and video’, ‘Studies of journalism practice and multimedia stories’ and ‘Studies of video in online media’. The studies included in the review represent different approaches and methods, and the review contributes with a systematic overview and organisation of the works that can be used by other scholars, or for educational purposes.

Article 2 is a discussion of the methodology within a case study approach when the object is to generate a specific genre of case studies for analytical purposes. The article discusses the methodical implications a researcher faces when case study is the scholarly approach and the research object is online multimedia news stories. Article 2 contributes with a scholarly example of a segment of the research process in case study research. Through the definition and reduction of the field of research and concretisation of the phenomena to be analysed, I have aimed to demonstrate how systematic information orientated searches can be applied when the objective is to generate a substantiated case that is suitable as an object for analysis in order to answer a specific research question. This concrete and applicable example can serve as guidance for researchers and students who seek to implement this specific case study approach in their research.

Research Article 3 is a comparative textual analysis of two longform linear author-driven embedded multimedia news narrative cases. Through my literature review and research I have not found other studies that implement the applied analytical theories and methods on similar narratives or such an exhaustive scale of journalistic data. By executing an in-depth, thorough textual analysis on the two longform case studies, I believe I have contributed to a deep understanding of how the narrative flow is performed in linear author-driven embedded multimedia news features. One could also argue that the study represents an attempt to implement ‘new’ theories on journalistic multimedia narratives and in this way explore the implementation of these theories within journalism research. The findings of the visual and textual analysis showed both convergence and discrepancies with the eye-

tracking experiment in Article 4. This result illustrates the expediency of mixed methods within analysis of multimedia narratives and shows that the combination of methods has expanded the understanding of the phenomenon ‘narrative flow’, compared to a single method approach.

Research Article 5 is a phenomenographic analysis of the variations of how practitioners perceive the production of multimedia narratives and a discussion of how these perceptions can affect journalism practice. The findings of Article 5 are six perceptions of multimedia practice presented in the ‘outcome space’. The six (variations of) perceptions contribute with knowledge on how media employees understand their practice, and this can potentially influence how competencies are developed and how multimedia production is implemented and organised in editorial rooms and opens up new ways of consciousness about the variations in how media workers understand their lifeworld, and consequently potentially work in new ways.

In sum, the articles contribute with knowledge from three different perspectives: textual analysis of journalistic longform multimedia narratives, user perspective on multimedia narratives and variations of perceptions of the production practice of multimedia narratives. The multi-perspective and multi-methodological approach display a multifaceted representation of research. This is both the strength of the dissertation and one of its shortcoming. The strength is that multimedia production is illuminated from different perspectives and with both shared and different data. On the other hand, fewer perspectives and a bigger sample of case studies in the text-analytical portion could potentially have led to an even deeper understanding of narrative flow in longform multimedia narratives. However, as I have chosen the longform author-driven embedded multimedia narrative as the object of the analysis, I would argue that the structural differences and magnitude of two case studies compensate for this weakness. The combination of methods (Article 3 and Article 4) also presents results that would be difficult to achieve with a single approach or method. The findings of the articles therefore present a refined understanding of the research phenomena, how the phenomena appear and how they are exposed, observed and perceived.

The changes in online presentation forms are constantly emerging. Pavlik (2001, 203) argues that, ‘Journalism has always been shaped by technology because – for journalism, function has often followed form’. The development that journalism production and news narratives have been through since the advent of Internet might be more a technological evolution than a concrete change in journalistic practice and journalistic content. The presentation form and narrative paths are customised in relation to platform(s) and technological opportunities and affordances. New technology and working tools obviously have impacted the concrete execution of journalism, labour functions and possibilities, but they have not necessarily fundamentally changed the foundation of journalistic practice or the characteristics of journalistic content. This is confirmed by the analysis of the two case studies presented in this dissertation and in the phenomenographic analysis of the interviews with practitioners. The fundamental story form, content or execution of journalism is not extreme or advanced in the cases compared with single media stories that are constructed with a continuous reading path, and the interviewees’ perceptions of the practice are based on traditional journalistic working routines, values and traditions.

However, technology can be perceived as amplifying or limiting established journalistic traditions. The digital platforms have delivered new communication channels. News stories tailored for tablets and smart phones are commonly produced in the newsrooms, which means that technological characteristics like small screens and touch-screen interfaces must be taken into consideration in the design and presentation of news. The newest versions seen in devices are ‘wearables’, like smart-watches and smart-glasses. These technology platforms might change the formula for telling narratives due to the technical characteristics and user interface. The changes we have seen in presentation forms up to this point could therefore be in the onset of the changes that might come. The rapid development of these publication platforms has taken place while the work on this dissertation was conducted. This illustrates the difficulties of scholarly exploration of a continuous developing field. However, the development constitutes

interesting areas for future research within the production and presentation of multimedia news narratives. How does the touch-screen interface impact the presentation and perception of multimedia news narratives? How is narrative flow created within this presentation form and technology? How does small-screen user perception impact the production and presentation of news? As a consequence of the world economic crisis that began in 2008, media outlets have been drained financially concurrently with decreased readership. This double pressure on the news media has resulted in new payment structures, reorganisation of the newsrooms and demands for effectiveness in journalistic workflows. This situation raises the question of whether there is motivation and capability to focus on innovation in journalistic presentation and storytelling. Will longform multimedia narratives, as a labour-intensive production form, increase or decrease to an exclusive story genre in privileged media? Studies that would address the stressed framework conditions of media organisations and the consequences on journalistic workflows and journalistic products are therefore relevant for future investigations. The audience's willingness to pay for online content could also be explored through studies with multiple research approaches on different story types and genres.

These are some of the interesting questions open to further research. This dissertation exemplifies that longform multimedia narratives, the practices of producing multimedia narratives and the audience perspective have yet to be investigated further. In the ongoing emerging media landscape, both presentation forms and publication channels might develop in unknown directions. The digital news environment has multiple unexplored areas for research in the future.

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APPENDICES

Appendix A: Analysis of AFCR.....	
Appendix B: Analysis of LC	
Appendix C: C1: Use of Oral Sources in AFCR and LC. C2: Story Elements Included in AFCR and LC.....	
Appendix D: Last Call (Sidste ud kald).....	
Appendix E: Survey.....	
Appendix F: CD with sound files of exit interview	
Appendix G: Transcriptions of qualitative interviews with media employees and CD with videofiles of interviews.....	
Appendix H: Question list.....	
Appendix I: Link to video files from eye-tracking experiment.	

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er et sted skabt af drømme og virkelyst, men i dag kæmper Kerteminde Kommune for at
erive. Lukkede virksomheder truer med at dræbe drømmen. Kommunen er en af de hårdest
te, når dagpengeperioden efter nytår sættes ned fra fire til to år. Især Munkebo med det
kede Lindøværft er hårdt ramt. Politiken zoomer ind på den fynske kommune. Finder de
sige arbejde i sidste øjeblik? Bliver de reddet af regeringens akutpakke? Eller må de gå fra hus
hjem? Hvad gør de for at komme ud af klemmen? Og lykkes det at genskabe drømmen?

Small video

Klippet alle fra
er til fejdedrenge på
de Lindøværft.
erftet er lukket, og
ereformen kommer
tune Kerteminde
lig hårdt. »Sådan er
led beskeden fra
he Vestager, inden
aldte akutpakke blev
e. Borgmesteren
ocial deroute, mens
kæmper for at finde et
et har han ikke

rtikken



FOTO: Munkebo kæmper efter Lindø

«Jeg troede aldrig, at værftet ville
lukke. Det kom som et chok for hele
Munkebo.»
Charles Tønder, pensioneret svejser



America's first climate
refugees
» One family's great escape

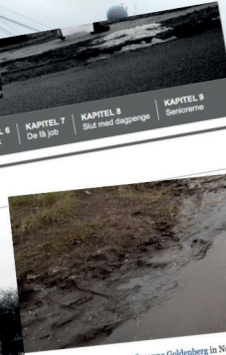
An undeniable truth?
» The at risk list

"It's happening now... The
village is sinking"
» The state we're in

Have your say on the Alaskan
communities under threat from
climate change

America's first climate refugees

Newtok, Alaska is losing ground to the sea at a dangerous rate and for its residents, exile is inevitable.



Suzanne Goldenberg in Newtok, Alaska, with video by Richard Springer

Sabrina Warner keeps having the same nightmare: a
huge wave rearing up out of the water and crashing
over her home, forcing her to swim for her life with
her toddler son.

What is a climate refugee?

The immediate image that comes to mind of "climate refugees" is
people of small tropical islands in the Pacific or of a low-lying
delta like in Bangladesh, where inhabitants have been forced out
of their homes by sea-level rise.

A child plays in a flooded part of
Newtok, Alaska. More than 150
village communities in Alaska are
experiencing flooding and loss of
land as ice melts due to climate
change. Photograph: Brian Adams